DOCUMENT RESUME

ED 441 995 CE 080 285

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TITLE	Development of Standards in Vocational Education and Training: Specification, Experience, Examples, July 1999 (Reprinted with Updates 2000). Manual. Volume 2. Qualifications and Training Methods.
INSTITUTION	German Federal Inst. for Vocational Training Affairs, Berlin (Germany).
SPONS AGENCY	European Training Foundation, Turin (Italy).
REPORT NO	AF-07-98-002-EN-C
ISBN	ISBN-92-828-4428-5
PUB DATE	2000-04-00
NOTE	98p.; For volume 1, see CE 080 284.
AVAILABLE FROM	For full text: http://www.etf.eu.int/etfweb.nsf/pages/vetdown/$file/dev-standards-volume2-2.pdf.
PUB TYPE	Collected Works - General (020) -- Guides - Non-Classroom (055)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	Cooperative Programs; *Curriculum Development; *Developed Nations; *Developing Nations; Foreign Countries; Government School Relationship; Labor Force Development; Material Development; Postsecondary Education; Secondary Education; *Standards; *Vocational Education
IDENTIFIERS	France; Germany; Netherlands; United Kingdom

ABSTRACT

An extension of the 1999 Manual, "Development of Standards in Vocational Education and Training," this second volume presents the key terms and attitudes, reports on experience and knowledge in standards development collected in recent years on the basis of questions raised during the process, and suggests how to deal with the problems encountered. A large part of this second volume is taken up with contributions from four Member States of the European Union: France, Germany, the Netherlands, and the United Kingdom, outlining the development of standards in vocational training in their countries. Part 4, "Development of Vocational Standards in Western Europe," has the authors: Annie Bouder and Jean-Louis Kirsch, who represent France; Hermann Schmidt, who represents Germany; Ties Pauwels and Anneke Westerhuis, who represent the Netherlands; and Bob Mansfield, who represents the United Kingdom. This manual focuses on specifications for qualification standards, competence, curriculum, modularization, and modules. It also highlights experience and recommendations from the countries studied as well as discusses these three models: outcome-based, occupation, and modular. In addition, the manual includes discussions on the following: (1) the orientation of vocational education towards the needs of industry and the labor marker; (2) the need for personal as well as occupational development; and (3) cooperation between the state and the social partners in the planning and implementation of vocational education and training. Twenty-four references and a glossary of terms are included. (KC)

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Qualifications and training methods

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Development of Standards in Vocational Education and Training - Specification, Experience, Examples

July 1999 (reprinted with updates 2000)

Volume 2

EC 130 285

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The European Training Foundation is an agency of the European Union which works in the field of vocational education and training in Central and Eastern Europe, the New Independent States, Mongolia and the Mediterranean partner countries and territories. The Foundation also provides technical assistance to the European Commission for the Tempus Programme.

This report was prepared with the financial assistance of the European Training Foundation. The views expressed herein are those of the Contractor and do not represent any official views of the Foundation.

Qualifications and training methods

MANUAL

Development of Standards in Vocational Education and Training - Specification, Experience, Examples

Ute LAUR-ERNST, Margret KUNZMANN and Bernd HOENE
(Federal Institute for Vocational Training - BIBB, Germany)

Volume 2

European Training Foundation

A great deal of additional information on the European Union is available on the Internet. It can be accessed through the Europa server (http://europa.eu.int).

Cataloguing data can be found at the end of this publication

Luxembourg: Office for Official Publications of the European Communities, 1999

ISBN 92-828-4428-5

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Printed in Italy

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Preface

One year ago the European Training Foundation published volume 1 (Manual) "Development of Standards in Vocational Education and Training"[1] in its series "Qualifications and Training Methods". In that Manual the results of discussions at three meetings (1995 - 1997) of an international expert group of the Foundation's Advisory Forum are summarised and supplemented. This led to a first guide for the design and implementation of vocational education and training standards, in which alternative models (basic types) and development processes are described. The *Manual* is designed for political decision makers and experts in central and eastern Europe who face the difficult task of fundamentally reforming initial and continuing vocational training in their respective countries.

The *Manual* prompted a major response and considerable approval not only in Central and Eastern Europe. Other regions of the world too, which find themselves in a comparable historic period of transition, have indicated their interest. It presents the complex and confusing area of vocational education and training standards in a transparent manner and offers assistance for their development. But that is by no means enough. Undoubtedly advice and an exchange of experience must be continued in order to further improve the international dialogue between east and west on vocational education and training and to make it even more fruitful.

This is what prompted the Foundation to commission a second volume on the subject "Standards in Vocational Education and Training". This report continues on from the 1998 *Manual*. It presents the key terms and attitudes, reports on experience and knowledge in standards development[2] collected in recent years on the basis of questions raised by us, and suggests how to deal with the problems encountered.

A large part of the second volume is taken up with contributions from four Member States of the European Union co-ordinated by the Foundation. Experts from France, Germany, the Netherlands and the United Kingdom outline the development of standards in vocational training in their respective countries. We have included these contributions in an unamended form in English. We would like to express our sincere thanks to the authors for their excellent support: Annie Bouder and Jean-Louis Kirsch (CEREQ/France), Bob Mansfield (PRIME Research and Development/UK), Ties Pauwels and Anneke Westerhuis (CINOP/The Netherlands) and Hermann Schmidt (former Secretary General of the Federal Institute for Vocational Training (BIBB)/Germany). Moreover we would like to thank Dr. Hermann Schmidt, Bob Mansfield and Dr. Stavros Stavrou (Deputy Director, CEDEFOP) for their final proof reading.

Our special thanks as well to Thomas Schröder at the Foundation for his renewed support and the provision of reports undertaken in the meantime on standards development and curricular reform, which we drew on.

This second volume was also prepared by the expert team from the Federal Institute for Vocational Training, Berlin: Ute Laur-Ernst, Margret Kunzmann and Bernd Hoene. This is the second edition of volume 2: the document was reprinted with updates in April 2000.

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1 Qualifications and Training Methods: Manual, Development of Standards in Vocational Education and Training. European Training Foundation. Turin, 1998. ISBN 92-828-4427-7

2 This draws on studies undertaken and material commissioned by the Foundation in the meantime, in particular: Expert Reports on Meetings of Subgroup C "Standards" (Advisory Forum), on the Foundation's pilot project "Standards 2000"; the Cross Country Analysis of Curricular Reform (in Phare region), cf. the list of references and sources)

1. Goals and structure

The second volume on the subject "Standards in Vocational Education and Training" has three goals:

1.1 Specification

In the current European discussion about the reform and further development of vocational education and training, new concepts and terms constantly reappear or old, well-known ones are given a new interpretation. Over the last few years, at the national level, there has been a diversity (if not confusion) of terms which, of course, increases in international dialogue and comparative analysis and hampers understanding. To counteract this, the European Training Foundation has taken several steps (e.g. producing a glossary) in order to ensure greater clarity about the meaning of these terms. Experience has shown that it is impossible to remove all ambiguities but the situation can be improved. With this volume we want to help to explain, demarcate and classify the key terms of "standards development in vocational training". This endeavour is undertaken in conjunction with the *Manual* (1998) and by drawing on the work undertaken in the meantime in the Foundation's working group "Standards", in the pilot project "Standards 2000" and the "Cross Country Analysis of Curricular Reform" (Phare) and with the help of the Glossary produced by PRIME Research and Development Ltd.[3]

The focus is on the following terms:

- ***Qualification standards***[4] in their various forms
- ***Competence*** and its concepts
- ***Curriculum*** and the alternative models on which it is based
- ***Modularisation*** and
- ***Modules*** and their system-specific relevance.

Specification, in this instance, is not solely or primarily a matter of collecting and comparing definitions but, rather, of establishing the common features of these definitions as well as classifying and grouping the English terms used most frequently in line with the vocational training models (types) on which they are based. This means that certain compromises and generalisations will be necessary since, at the national level, there are normally several system approaches which have been implemented in parallel (e.g. dual training alongside school-based vocational training. Furthermore, a strict and clear vocabulary has not always been used (not to mention the numerous translated

3 A Glossary of the words used to describe Occupational Standards and National Vocational Qualifications. PRIME Research and Development Ltd, 1998. Available for downloading from the PRIME web site: http//:www.prime-research.demon.co.uk. The glossary was developed using the Cobuild English Dictionary, based on the Bank of English at Birmingham University. The dictionary is published by Harper Collins, London - ISBN 0 00 370941 8 (hardback) ISBN 0 00 375029 9 (paperback).

4 The term "qualification standard" is still used in the first part of the document where there is an implicit reference back to Volume 1 for consistency reasons. In all other cases we have changed this term to "Vocational education and training standards".

versions). It should also be noted that the differences between training systems and vocational education and training standardisation add to the confusion. Many special terms are interpreted in different ways with little common understanding.

On the whole we are pursuing a pragmatic, not a systematic scientific approach. The latter is not possible within the framework of this work nor does it make sense in our opinion given the current lively dialogue and vocational training dynamics in many countries. Furthermore, in the tradition of *Manual I* we will again present fundamental types and identify, if possible, the corresponding trends in standards development in Central and Eastern Europe as well the New Independent States of the former Soviet Union. It is a matter of highlighting options as well as facilitating comparison between national approaches.

1.2 *Experience and recommendations*

The case studies and expert meetings to develop and implement vocational training standards[5] undertaken in the course of the Foundation's pilot project "Standards 2000" as well as the Cross Country Analysis on Vocational Education and Training Reform in the Phare region[6] all underline the difficulties facing Central and Eastern Europe when it comes to transforming their vocational education and training systems. Only a few countries, e.g. the Czech Republic and Hungary, have succeeded in putting together an extensive reform process, which has been given the political go ahead and is gradually being implemented. Other countries have, so far, been unable to agree on a statutory basis or tend to change their reform approaches relatively frequently (e.g. Russia and Poland). A third group had to first set up its own infrastructure for planning, researching and implementing activities in conjunction with vocational education and training. This applies, in particular, to the New Independent States of the former Soviet Union, for instance Kyrgyzstan or Mongolia, which, hitherto had been completely dependent on decisions handed down by the central government in Moscow. In this section we suggest various approaches and steps which can help to overcome the problems encountered when setting standards for vocational education and training.

1.3 *Examples*

For *Manual I* we asked four Eastern European countries to present the methodologies they used for the development of standards: the Czech Republic, Slovenia, Latvia and the Ukraine provided us with interesting contributions. In this volume we continue the series of examples and this time we have given the floor to four Member States of the EU: France, Germany, the Netherlands and the United Kingdom. Based on the questions supplied by us, they describe how they see vocational education and training, the definition and development processes for their standards as well as their national implementation and evaluation strategies. These are variations of the three fundamental models discussed in the *Manual*:

- ***outcome-based model***
- ***occupation model***
- ***modular model.***

5 H. Schmidt, 1998

6 D. Parkes, et al., 1999

The examples makes these basic models more transparent and puts some flesh on them. At the same time, these examples demonstrate the diversity of vocational education and training in the European Union. There are no uniform European models or standards. However, in the EU there has been some agreement about a number of principles which each Member State is seeking to implement. They include, for instance,

- the orientation of vocational education towards the needs of industry and the labour market,
- the need for personal as well as occupational development,
- the integration of practical experience within vocational training programmes,
- co-operation between the state and the social partners in the planning and implementation of vocational education and training.

All these aspects are reflected in the definition and in the development of vocational education and training standards at the national level.

2. Key terms in standards development in international dialogue

2.1 *Difficult starting position*

Central and Eastern European countries and the New Independent States of the former Soviet Union are currently undergoing a transformation process which affects all social areas and is far from being concluded or stabilised. The dynamics of the process are evident. Communication between east and west has proved to be very useful for both sides. At the same time, it demonstrates how much business structure, culture and mentality shape a country's vocational education and training system.

The implementation of joint European programmes, like Phare and Tacis, as well as the numerous bilateral co-operation projects between the individual EU member states have led to the partner countries being confronted with a plethora of what were often incompatible approaches to vocational education and training. Each advisor or donor country has handed on its own specific philosophy, concepts and structures of vocational education and training to these countries. Consequently, at various locations in a country different system approaches are being tested. Co-ordination work of this kind could not be undertaken either by the western European side or by Central and Eastern European countries or by the New Independent States themselves. Furthermore, it should be borne in mind that the vocational education and training systems found in the EU, just like those outside Europe (e.g. USA, Japan, Australia), are in competition with one another. This means that a link-up of the various approaches in the course of providing advice to partner countries in Central and Eastern Europe is unlikely. Hence there are many concepts and terms which have not been sufficiently clarified. This is an obstacle to the reform process.

At the same time, in recent years it has become obvious that the common national terms normally used to describe vocational training in Central and Eastern Europe no longer suffice if industry and labour market developments are to be included. System changes call for new technical terms, which on the one hand, must be compatible with the dominant trends in the EU and, on the other, draw attention to national autonomy. Hence, new terms, often English words, are increasingly being used in the international dialogue on vocational training, terms which had not been used or in some cases were completely unknown in the national framework such as "standard", "module", "competence", and "curriculum".

A glance at translated publications or international glossaries reveals that in both the east and the west, use is often made of literal translations of system-specific technical terms. These new creations are confusing in some cases because they do not automatically convey the specific situation in the vocational education and training system of a country. People are not familiar with the term within their own system and often it is difficult to envisage what the word actually means. In scientific comparisons, agreement has been reached for the purposes of better international understanding and comparison on so-called "functional terms" in one language (e.g. English). These terms can be used in the same way by all countries involved, although other terms might be used in the national language. The introduction of functional terms of this kind for the subject area "standards in vocational training" was tested in the Manual I in a first stage on the basis of agreements reached in expert meetings which caused a revision of the text and is now being continued in this second volume.

A prerequisite to understanding the vocational education and training systems of other countries is clarity with regard to the terms used, but that alone is not enough. Even the best glossary does not remove the need to systematically examine vocational training approaches in the relevant reference states. That is one of the reasons why four national examples of standards development have been extensively presented in this volume (cf. Part 4).

In summary:

1. Several English terms are used in vocational education and training, which indirectly reflect a national vocational education and training system. One typical example is the word "standard" which is increasingly being used in international dialogue. It refers to something which is described in Germany as "Ausbildungsordnung" (training regulation) or in France as "référentiel" (frame of reference). In the United Kingdom it means "specification". It could best be described in many Central and Eastern European countries by the term "normative".

2. The same words/terms have different meanings depending on the system view of the expert, or different terms are used for the same or similar situations. One typical example of this is the use of the words "vocational" and "occupational", which refer in part to a defined concept, the "occupational model", or are used as synonyms that refer not to the occupational model, but rather a company work area/function area.

3. A literal translation of technical terms from one language into another is sometimes the only way to tackle the problem, but it by no means guarantees understanding of a typical national term and what it actually means.

4. It is extremely difficult to find exact linguistic equivalents and definitions, not only in English but also in other languages because of specific national meanings (e.g. in a glossary). To do so would require considerable time, effort and money.[7]

5. There are hardly any general definitions for all countries and systems, but international agreements do exist for the main vocational training situations (e.g. training standards, assessment models, competence levels, credits) and the related supranational functional terms. The European Training Foundation's activities are one example of this. These functional concepts can then be supplemented at national level with the specific features of the relevant vocational training system and correspondingly interpreted.

Against this backdrop an attempt is made in the following chapters to clearly outline or classify a few key terms in the development of vocational education and training standards and their practical implementation.

2.2 *Specification of the term "standard"*

In principle "standard" means: agreement on a norm or specification. We are all familiar with industrial standards (industrial norms or specifications) which have been agreed and which are valid at international level. They include the quality assurance standard ISO 9000, which is increasingly under discussion in the education sector. Compared with technology, production or the financial sector, uniform standards in the education sector are far more difficult to define and by no means as clear since the national education systems are firmly anchored in a country's history, culture and society. Hence uniform vocational education and training standards have not been

7 For years CEDEFOP endeavoured to do this but it did not achieve the desired effect.

agreed so far in the European Union although there is some standardisation in terms of details (e.g. technical knowledge, technical skills) and, in some cases, at the system level. This will become clearer later in the report.

In principle, standards in vocational training are an interface and a link between the education system on the one hand and the labour market and industry on the other. They bring together the goals of education and the labour market. The relationship between vocational education and training standards within the education sector (general education, higher education) and the labour market varies depending on the vocational training policy of a country and its statutory foundation. Figure 1 shows this fundamental link.

Fig. 1: Occupational/vocational standards (qualifications) - interface between education and the labour market

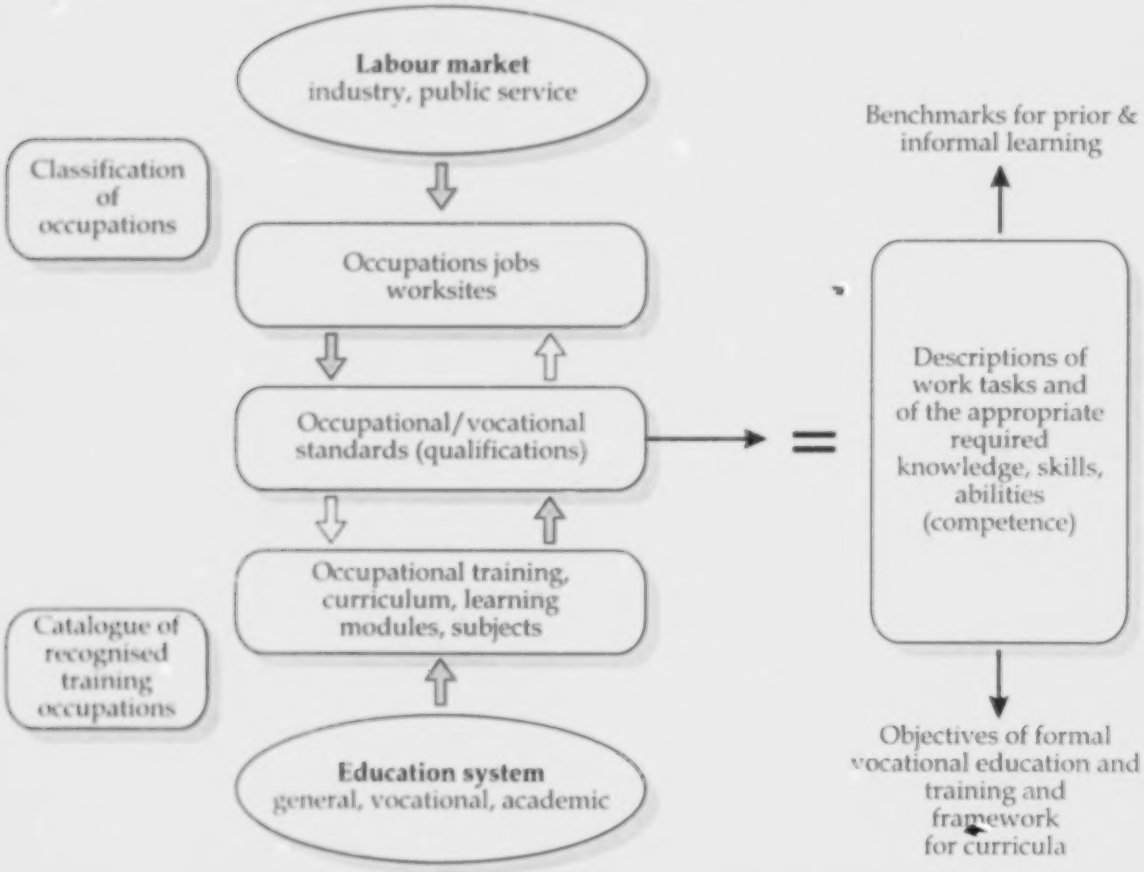
Labour market
industry, public service
Classification of occupations
Occupations jobs worksites
Occupational/vocational standards (qualifications)
Occupational training, curriculum, learning modules, subjects
Catalogue of recognised training occupations
Education system
general, vocational, academic
Benchmarks for prior & informal learning
Descriptions of work tasks and of the appropriate required knowledge, skills, abilities (competence)
Objectives of formal vocational education and training and framework for curricula

Figure 1 draws attention to an important difference which must always be borne in mind. On the one hand, there is the labour market classification of employment occupations and jobs, and on the other a register of training occupations which are important for the structuring of vocational education and training. These two occupational clarifications are not identical. The "International Classification of Occupations" (ICO) lists 15,000 employment occupations and the German Employment Office lists as many as 35,000. The number of training occupations, by contrast, is far lower, for example, between 250 and 350 in Germany, Russia or the Ukraine. Training occupations are far more complex and broadly based than jobs. For instance, if one has learned a recognised occupation in an education system, then one has access to a whole range of jobs comprising an occupational family of jobs on the labour market, particularly when training occupations are so

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broadly based that they develop a solid foundation. This broad base of competence is the declared goal of many Central and Eastern European countries. It has led on the one hand to a clear reduction in the number of recognised occupations compared to before, and on the other to modified training profiles and the related curricula. Hence, a distinction has to be made between occupational standards which are part of the labour market and employment system, and occupational standards which are part of the education system, and this we do. We refer in principle to the education sector as the reference framework.

In the European Training Foundation *Manual* (1998, p. 4) the following definition is given for the term **"Standard in VET"**:

> ***"Standards describe the work activities which are to be carried out within the framework of a specific occupation activity as well as the related knowledge, skills and abilities. Standards are compulsory for all those involved in vocational education and training".***

The manual also describes the components of vocational education and training standards, which include:

- **Occupational profile/training or task profile,** which describes which group of work activities must be undertaken and the manner in which (e.g. independently or according to instructions) the corresponding occupation or activity is to be successfully pursued;
- **Assessment requirements**, which lay down which work activities are to be tested at the end or in the course of training and what minimum level of knowledge and skill must be demonstrated;
- **Entry requirements** which stipulate which education certificate/level of competence must be held (educational prerequisites) if a certain education course is to be embarked upon; and
- **A curriculum and syllabus** which describes the learning goals, the theoretical and practical knowledge to be taught as well as the structure and length of individual sections and the overall training course.

The majority of people in the international expert group of the Foundation's Advisory Forum have agreed on this extensive description. It is based on the following system characteristics which are very common in Europe but not to be found everywhere. The system characteristics are:

1. Vocational education and training is oriented towards the labour market, the requirements of industry and the framework conditions in companies. There is national agreement that occupations or specific groups of work activities are the decisive reference framework for education and training and that it is the task of vocational training providers to train young people and adults correspondingly.

2. There was not only agreement on the requirements (training goals) i.e. the knowledge, skills and abilities to be proven and laid down as a norm, but there is also a desire to ensure that the path to the goal, the learning and teaching processes are comparable, and that the main principles, at least, are complied with everywhere. Hence the main parameters of the curriculum, i.e. the content, the method, the learning site, the duration of individual learning sections of the education course, are stipulated (e.g. the Netherlands, France, Germany, the Czech Republic, Hungary, Russia, Ukraine).

3. Vocational training aims to smooth the transition to the world of work and to equip the individual with the corresponding technical and occupation-specific competence. At the same time, it should aim to keep the door open to other training courses.

4. Consequently, many systems lay down entry requirements and, in order to issue a diploma or certificate, specify the assessment requirements/tasks as well as the assessment methodology and assessment of performance (this is common practice in most European countries.

For many Central and Eastern European countries the involvement of the social partners and the orientation of vocational training towards the qualification needs of industry is restricted or not possible at all (see also part 3). By contrast, for them it is very important not only for the training goals (competence requirements) but also the training paths (contents, steps, and methods), i.e. the curriculum to be made compulsory for all vocational colleges/training institutions. The French, Swiss, Germans and Dutch also lay down curricular details. In other countries there is a different approach: the occupational requirements (the outcomes) are specified at national level, together with the assessment requirements, but the training programme and the length of training are not specified. The United Kingdom's National Vocational Qualification (NVQ) system is an example of this approach. In this context, occupational standards are not classical educational objectives but benchmarks against which competence is measured, using a variety of methods.

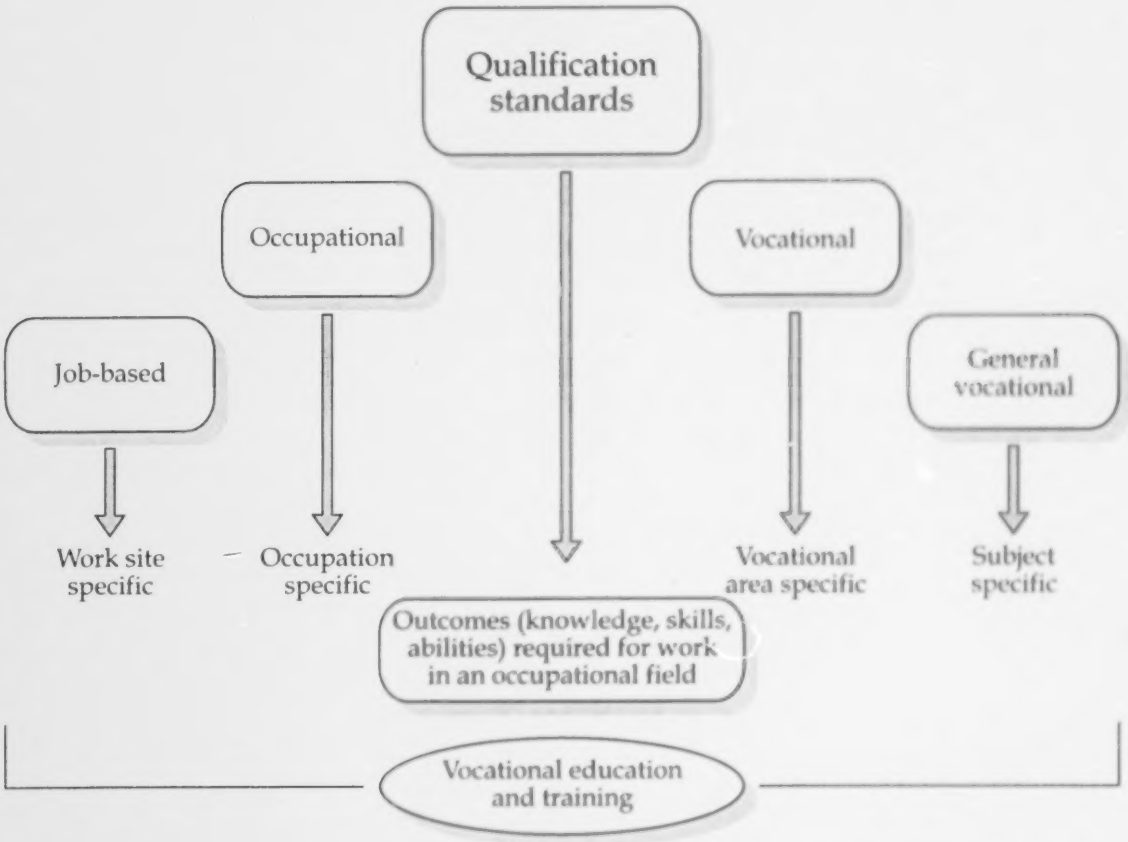
If we seek to identify the common nucleus of vocational education and training standards in European or non-European vocational education and training, i.e. a definition used in (almost) each vocational education and training system, then this refers to the competence required for the work activity, normally linked to a description of the respective assessment requirements/assessment criteria. This is what was agreed upon in further discussion by the European Training Foundation's working group "Standards"[8] and "Standards 2000". Hence we suggest the following definition for a vocational standard:

> ***"Standards are (generalised) descriptions of work activities linked with the outline of the appropriate (relevant) knowledge, skills, abilities (competence).***

Drawing on the European Training Foundation glossary (1997), we describe this definition in abbreviated form as a **"qualification standard"**. It implies an industry-led vocational training policy and its corresponding implementation in practice. However, as mentioned above, this does not apply so far to all of the Foundation's European partner countries. Hence we must differentiate different types of "qualification standards" which reflect current national variations (cf. Figure 2). These types are: **job-based, occupational, vocational, general vocational**. They all represent specific vocational training concepts and policies.

8 Hermann W. Schmidt (ETF Subgroup C "Standards"): The Evaluation/Progress Review of VET-Standards, Expert Report, European Training Foundation, February 1998.

Fig. 2: Different versions of qualification standards depending on vocational education and training policy



The term **"occupational"**, sometimes also "professional", is mainly used in those countries in which the occupational model is used, i.e. a well defined "training occupation" which is normally listed in an inventory of accredited training occupations is the basis for the learning process. This is the case in many Central and Eastern European countries like Bulgaria, the Czech Republic, Slovenia, Russia, and the Ukraine, but also in EU Member States like Austria, Denmark and Germany. Furthermore, the occupational principle also applies in France and in the United Kingdom when it comes to apprenticeship training.

Vocational education and training systems, which are oriented more towards in-company areas of activity or functional areas, prefer the term **"vocational"**. It is not an occupation made up of various work areas which emerges at the end of training but the acquisition of a series of skills for an area of activities (e.g. marketing, design, accounting, programming, CNC technology), which can be found in various sectors. These "vocational qualifications" may be the same as the occupational qualifications gathered together in an occupation as corresponding comparative studies have shown, for instance, in German and British standards.

Furthermore, there are vocational education and training systems which, in practice and for various reasons, are not yet oriented towards the labour market and company requirements. They define their learning goals from a training perspective, organise training courses based on school subjects and orientate themselves towards traditional subjects or disciplines (e.g. business administration, electrical engineering, and computer science). These variations, called **"general vocational"** here, can still be found in many Central and Eastern European countries. But they also constitute one strand within the vocational education and training systems of many EU Member States.

The counterpart to this "general vocational" orientation is **"job-based"** training, which involves developing the knowledge, skills and abilities required at a specific company workplace. If only workplace orientation is characteristic for national vocational training, then the qualifications of the workforce will prove to be specialised, rather narrow, context-specific and only transferable to a limited degree. This type of short training is widespread in the USA ("on the job training") and is increasingly being used in Europe as a supplement to what was initially broad general vocational training in order to get unemployed young people in to work. In-company training is normally undertaken in a manner which facilitates direct, authentic work experience. However, in all dual systems of vocational training it is extended to encompass general and transferable competence.

The four variations of the **"qualification standard"** are given in Figure 2 in accordance with their general or specific nature or their proximity or distance from real labour market requirements. In this case the terms "occupational" and "vocational" are interchangeable. In some countries the vocational qualification standards are oriented very much towards the world of work. In many cases they are developed from the real in-company context. The qualification standards may also vary: they are either oriented one-sidedly towards what is demanded by industry and public service of the occupation holder or they extend this demand to include broader competence with a higher general content.

Of course, there are also mixed forms of qualification standards within a training course. For example, in a first year of more "general vocational", a second year more "occupational" and in the third year more "job-based", as there are different strands within the national vocational training systems. These mixed forms are on the increase both on the system level and within training courses since differentiation in vocational training is the goal everywhere. Everyone should have alternatives.

2.3 *Competence - what does it mean?*

Just as the term "qualification standard" covers a diverse number of system-specific variations, the term "competence" cannot be clearly defined in terms of content and general validity since it is a theoretical construct. However, it does indicate a new orientation in vocational training which began in the 1970s and continued up to the 1980s in many western European countries. The term "competence" underlines that it is not primarily a matter of the transfer and availability of individual technical or operational knowledge, skills and abilities, but more broadly useable, holistic transferable competence to be developed in vocational training which can provide a foundation for later on. However this trend has not been implemented on the same level in all countries in Europe. Again we encounter a broad range of **competence concepts**.

In Germany, e.g. from 1980 onwards, people used the concept **"occupational action competence"** (translated literally) in order to describe the goal to be achieved in initial training. This means a package of related, complex technical and general skills, including key skills, which enable the holder to successfully pursue an occupation at different relevant in-company workplaces (occupation model). This targeted overall qualification, the "occupational action competence", is not set in stone for the respective occupation. It can be changed since the requirements and conditions of the world of work also change as do the expectations and interests of the individual and society. Hence, a review of occupational qualification standards (training regulations) and a redefinition of occupational action competence is necessary at regular intervals. It may also be the case that completely new training occupations are agreed on, which encompass a different package of competence from the outset.

In the mid-1980s work began in the United Kingdom on the development of "**National Vocational Qualifications**". Here, the term 'competence' is used to describe both the individual 'units of competence' (or modules) which are grouped into qualifications and the standard of achievement in competence based assessment. The fundamental principle, which stresses the importance of the outcome of training, has met with considerable approval world-wide not least because this procedure does not require national agreement on a syllabus.

This "outcome" orientation in the United Kingdom is also an expression of the desire to create a close link between the labour market and the vocational training system. This is achieved by making the occupational standards (the requirements of employment) exactly the same as the 'vocational' standards which are used to define the outcomes for vocational, initial and continuing training – the National Vocational Qualifications.

Hence, the concept of competence on which the NVQ system is based pursues a different logic than, for instance, that of the German vocational training system or the system in France. In France there is an also an orientation towards the occupation model and there is talk of general and transversal competence ("**capacity**") and of occupation specific know-how ("**savoir faire**"), which together with the relevant fundamental knowledge, make up the overall occupational competence. But because of the extensive school (academic) traditions in vocational education and training, there is a far clearer emphasis on other elements in the competence profile in France.

In the Netherlands we encounter a whole series of differentiated competence concepts not least because of the four level classification in the vocational training system: from the acquisition of partial competence ("assistant level") up to university level. Furthermore, the Dutch system is highly segmented and offers numerous opportunities.

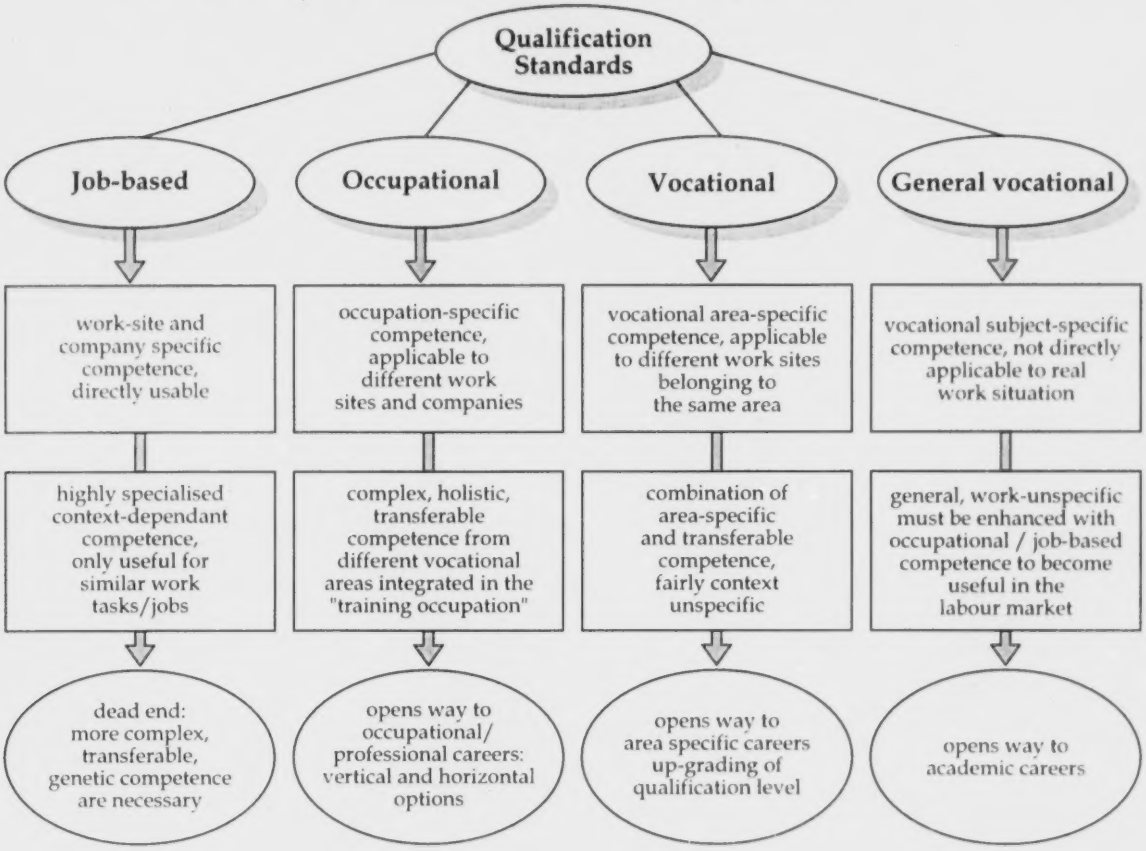
Let us look towards the east. If we turn to Poland with its clear school tradition which is again shaping current reform moves in vocational training policy, then general content (up to 50% of the curricula) play a very important role in vocational education and training (vocational grammar schools/technical colleges). Another important factor is the teaching of general vocational subjects which refer to one area of knowledge which, in turn, is oriented towards the corresponding academic subjects. The knowledge acquired, particularly when instruction is based on classical teaching methods, is scarcely comparable with occupational competence which enable the holder to carry out real work activities in the company. The general vocational competence acquired under a system of this kind have a different quality than for instance the occupational action competence in Germany or the United Kingdom's National Vocational Qualifications.

Besides a core curriculum outlining compulsory general and occupational competence, the reform concept developed in the Czech Republic envisages the inclusion of modules for occupation specific qualifications as well as optional additional qualifications. The competence acquired and demonstrated by an individual at the end of a training course differ in structural and general terms, never mind the ongoing inter-individual differences.

In summary: (cf. Fig. 3):

The competence developed and examined in tests or assessments and their usability on the labour market and for continuing training differ in principle depending on the compulsory qualification standards in a vocational training system.

Fig. 3: Dependence of competence development on the quality/structure of the qualification standards in a vocational training system (typical models)


Qualification Standards
Job-based
Occupational
Vocational
General vocational
work-site and company specific competence, directly usable
occupation-specific competence, applicable to different work sites and companies
vocational area-specific competence, applicable to different work sites belonging to the same area
vocational subject-specific competence, not directly applicable to real work situation
highly specialised context-dependant competence, only useful for similar work tasks/jobs
complex, holistic, transferable competence from different vocational areas integrated in the "training occupation"
combination of area-specific and transferable competence, fairly context unspecific
general, work-unspecific must be enhanced with occupational / job-based competence to become useful in the labour market
dead end: more complex, transferable, genetic competence are necessary
opens way to occupational/ professional careers: vertical and horizontal options
opens way to area specific careers up-grading of qualification level
opens way to academic careers

This figure demonstrates in principle which opportunities are linked to the four types of qualification standard and the level of competence acquired in vocational training. Of course, the value of the competence depends on the attractiveness of vocational training, on its social recognition, on the recruitment behaviour of companies and on admission requirements in the field of higher education. A decision in favour of one type constitutes a fundamental political and socially relevant decision. In reality, there is a series of intermediate forms and normally several strands within each system.

In determining the level of competence which has been acquired, methods and approaches vary. In all systems the 'outcomes' of learning are assessed through a variety of assessment methods. But in many systems, other important factors will also be taken into account in the evaluation of the training programme - for example:

- the content of the training course, the methods used and, where appropriate, the experience gained at various learning sites (e.g. school, workshop, training centre, company);
- any existing knowledge and skills and competence developed outside formal training courses;
- the individual character-specific preconditions and opportunities which the individual has and
- the qualification of teachers and trainers.

In vocational training systems where all these factors are compulsory, evaluation data can be combined with individual assessment to give confidence in the performance of the system. However, in systems where only the outcomes of individual achievement are assessed, the competence of assessors becomes more critical because the final assessment is the sole evaluation instrument. This is the situation in the United Kingdom. Although many parameters of training programmes are evaluated in the UK by quality assurance agencies, the assessment of individual knowledge and performance is the most important evaluation factor. Consequently, considerable resources are committed to the training and certification of assessors – who have to have a certificate to conduct NVQ and SVQ assessment.

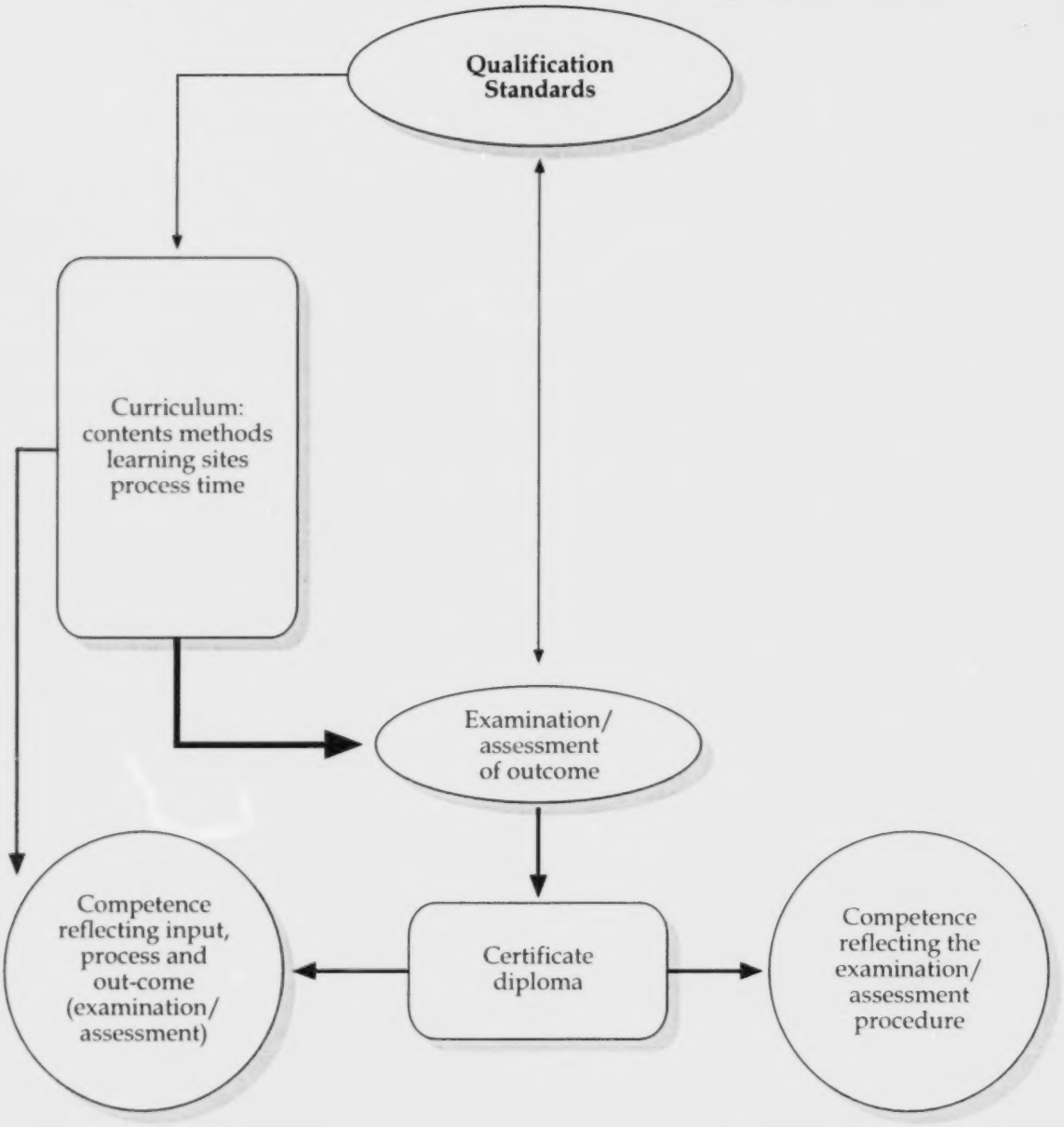
The type of assessment method will also vary considerably. If there is confidence in the training process with considerable evidence of competence gathered during the training programme, then final assessment may be less rigorous. However, if only a final assessment is used then the assessment methods and processes need to be of high quality to produce valid and reliable assessment decisions.

This presents a dilemma for many vocational training systems. Overall, the need to create flexibility in training provision to allow changes in the labour market to affect and change training design and delivery is recognised. If flexibility is permitted in delivery – i.e. the content and length of learning is not specified – then the reliability and validity of assessment must be assured by concentrating resources towards assessment. Problems will occur if flexible learning and delivery is combined with limited assessment methods – for example, multiple choice testing. Assessment systems must be rigorous in testing both the skills and knowledge acquired and the ability to use both knowledge and skills in practice.

Figure 4 illustrates this problem. It always exists on a certain scale but is exacerbated when there is a free choice of curriculum or generally speaking of the type and manner of competence acquisition.

In conjunction with the accreditation of prior or informal learning, this problem becomes acute. Here good and, at the same time, viable procedures have to be developed in order to suitably reward this type of competence acquisition both when it comes to undertaking relevant or continuing training courses as well as for in-company careers. CEDEFOP is conducting studies on this aspect in the EU Member States.

Fig. 4: What competence does a vocational training certificate/diploma reflect?

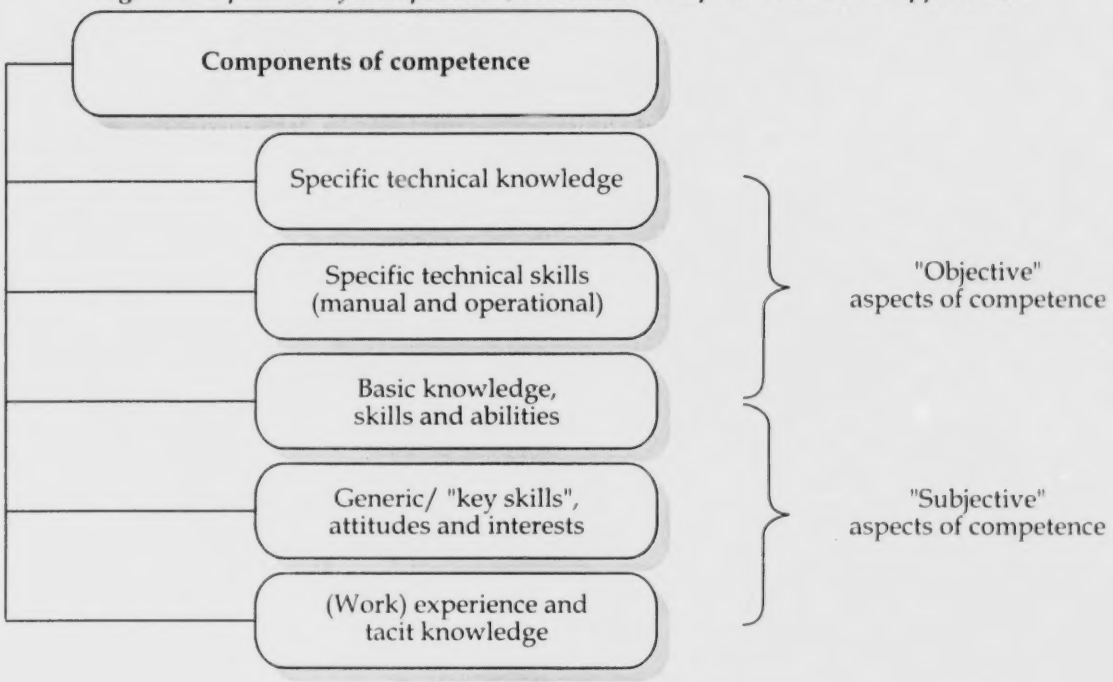

Qualification Standards
Curriculum: contents methods learning sites process time
Examination/ assessment of outcome
Competence reflecting input, process and out-come (examination/ assessment)
Certificate diploma
Competence reflecting the examination/ assessment procedure

When establishing qualification standards, modern vocational education and training increasingly assumes complex work activities. It no longer reduces them to detailed, highly segregated and isolated learning goals (competence particles) which was frequently the case in 'Taylorised' work organisations in the 1960s and 1970s in western Europe and also in Central and Eastern Europe (and is still frequently the case). It has since been recognised that major segmentation of learning does in the end lead to specific knowledge and skills but not always to holistic competence (the link between theory and practice, the integration of knowledge and action), which are the prerequisites to tackling work activities. By bringing key skills (generic aspects of competence) into vocational education and training, considerable segmentation of the learning process proves to be even less suitable, particularly when these supraordinate intellectual, social and character-related skills and attitudes are to be learned in conjunction with occupational / vocational skills, knowledge and competence.

In this context the promotion of individual personality development also plays a major role as a component in vocational training. Is the trainee or employee merely being "drilled" for specific workplaces or is vocational training endeavouring to promote individual potential? The latter approach is the one adopted in the majority of EU Member States.

Against this backdrop a distinction can be made between the following components of "occupational/vocational competence". When combined they enable the holder to successfully tackle work activities and situations in the world of work and to develop his/her personality.

Fig. 5: Components of occupational/vocational competence (modern approach)


Components of competence
Specific technical knowledge
Specific technical skills (manual and operational)
Basic knowledge, skills and abilities
Generic/ "key skills", attitudes and interests
(Work) experience and tacit knowledge
"Objective" aspects of competence
"Subjective" aspects of competence

2.4 *Curriculum: Concept and alternative models*

If one draws this conclusion from the system-specific qualification standards and competence concepts presented, then it is clear: in European vocational training there is no uniform understanding of the concept "**curriculum**", but rather a series of definitions and models. These may be narrow or wide, technical or action-oriented, detailed or flexible for each situation, described from the perspective of the trainee or viewed as a political regulatory instrument. A general recommendation or "laying down" of a curriculum concept as an instrument of reform, or the attempt to transfer curriculum understanding to another culture with its own traditions and priorities, is always problematic although this is a very widespread approach.

Consequently, we should fully agree with the conclusion by the authors of the "Cross Country Analysis of Curricular Reform", (European Training Foundation 1999): David Parkes, Detlef Gronwald, Peter Grootings, and Soren Nielsen:

> ***"The principal characteristic of the Phare supported curriculum reforms for vocational education and training has been the attempt to initiate a systemic reform of the whole system, through the introduction of a particular curriculum model in a limited number of pilot schools. The model was imported from EU countries and, though ideologically attractive, paid little attention to the specific transition conditions of each individual country." (p. 30)***

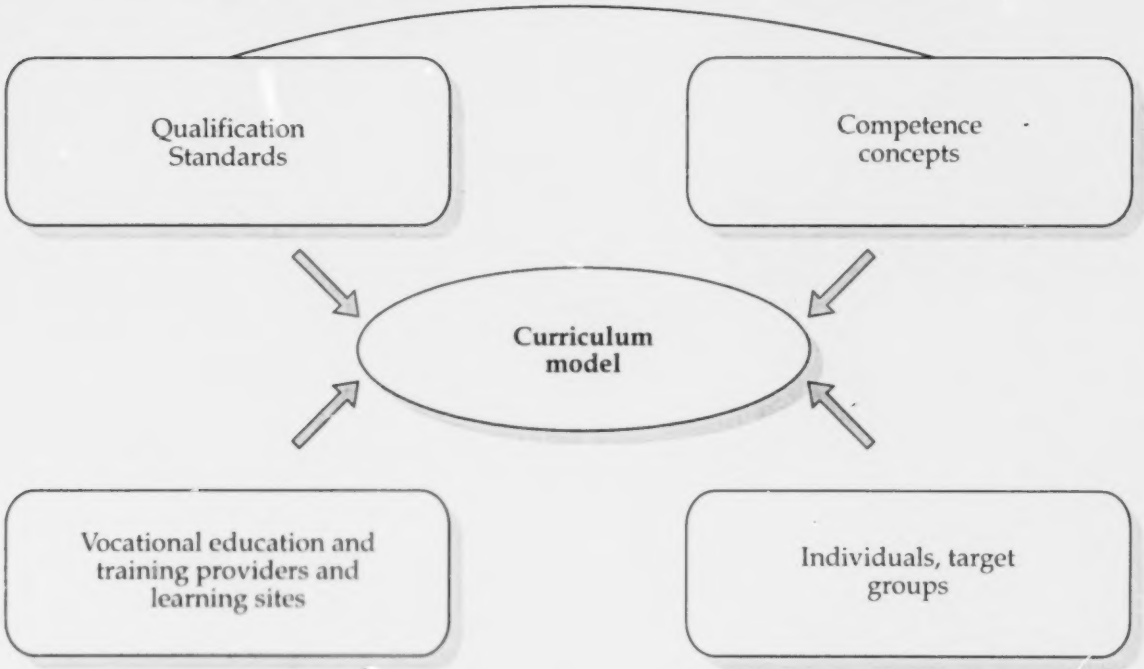
It is undisputed and has been confirmed empirically again and again that a strategy of exporting a specific (west European) concept to Central and Eastern Europe or other regions leads to problems.[9] The prime goal must be for each country to select or develop for itself its curriculum model, which will slot into the overall framework of the national vocational training system and do justice to the reform ideas agreed in the country. Undoubtedly, this is a difficult task which, given the situation in Central and Eastern Europe, can only be achieved in the long-term. In EU Member States too, curricular reform took time. In the 1960s, for instance, in many countries the concept of the **"teacher proof curriculum"** was propagated whereby the minutest details were laid down in order to secure a maximum degree of comparability and uniform quality. This policy of strict curricular requirements, however, soon reached its limits. The learning success was not satisfactory nor could this be reconciled with an increasingly democratic and self-aware attitude of trainers and trainees. It triggered widespread discussion about the alternative model: the "open curriculum" which allows more scope for the shaping of the teaching-learning process and its improved adaptation to the concrete situation.

The dispute about closed or open curricula has been ongoing in Central and Eastern Europe and in the New Independent States since the beginning of the 1990s as part of the transformation process. The progress made varies considerably as confirmed in the Foundation's Cross Country Analysis. In many countries a highly traditional understanding of the curriculum prevails, despite a new orientation in political circles and amongst experts when it comes to defining qualification standards. Only in a few cases has there been a development of open, action-oriented curricula not least because of the lack of correspondingly qualified experts and teachers.

The common curricular models which represent a specific ("typical") philosophy of vocational training and its ("typical") system-specific institutionalisation are presented below. Within these categories there are again a number of alternatives. This diversity results from the respective qualification standards and the related concept of competence and also from the organisation of vocational training, the training institutions involved and the training sites, as well as the respective learning group. Figure 6 illustrates this situation.

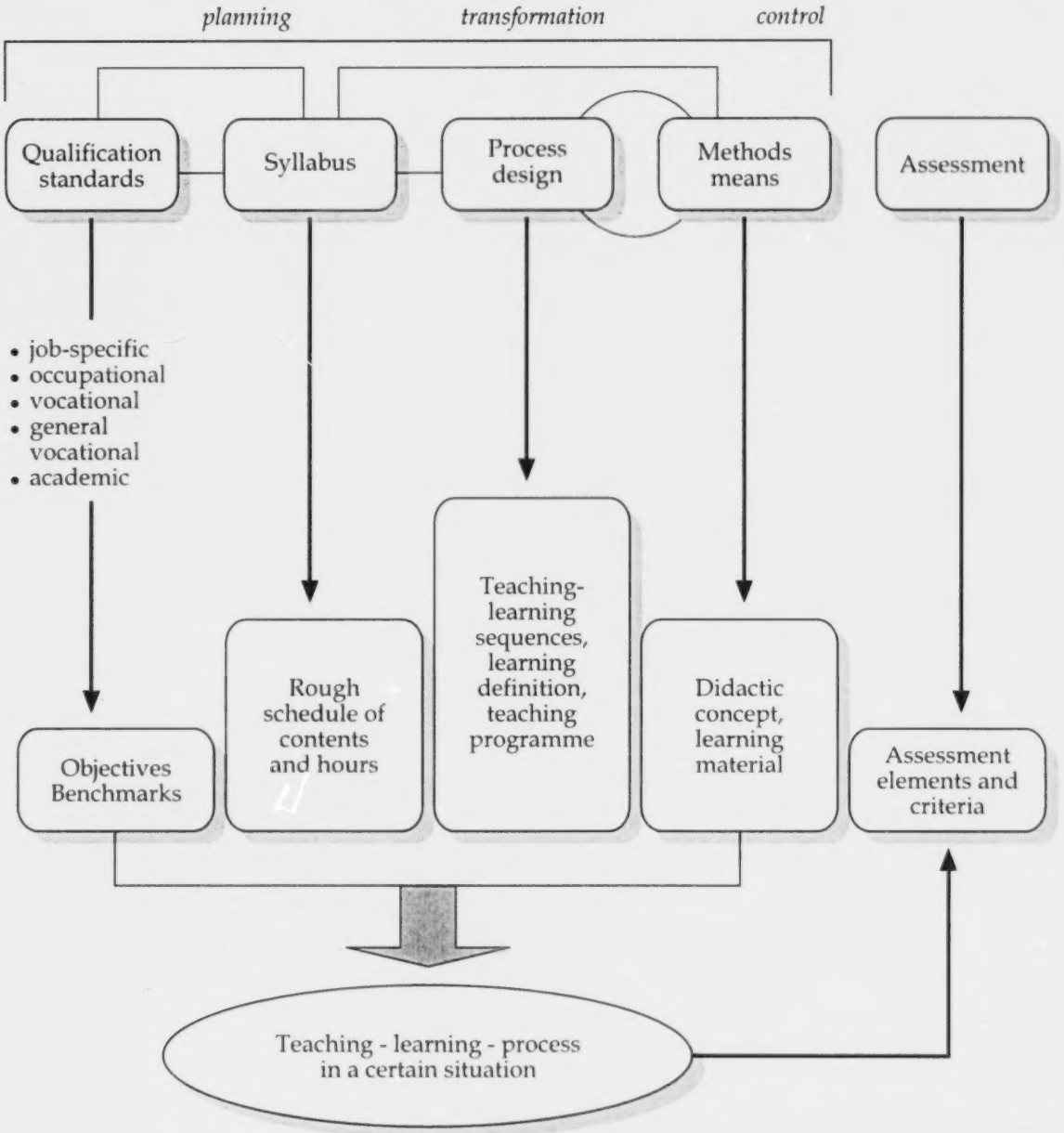
9 In the framework of the German Transform Programme to support 11 Central and Eastern European countries in the modernisation and restructuring of vocational training, we explicitly avoided a "universal approach" and tried to develop country-specific curricula together with the people concerned.

Fig. 6: Determinants for the design/selection of a curricular model



In most Eastern and Western European countries the curriculum is part of compulsory vocational education and training standards. However, the degree of detail in national curricula varies considerably and is questioned by reformers as the dynamics of technical and economical development increase. Following on from the fundamental description of the elements of vocational curricula (cf. *Manual*, p. 4) agreed by the international European Training Foundation expert team "Standards", we also assume here an extensive definition which encompasses qualification standards (competence to be acquired/learning goals) on the one hand and assessments on the other (cf. Fig. 7).

Fig. 7: Components of a vocational training curriculum (broad definition)



There is a major distinction made here between the curriculum as a regulatory instrument of education policy and the teaching/learning process implemented on the basis of curricula agreements – real experience with individuals at a specific site (e.g. in the classroom or in a company). A mixing of the two levels renders comprehension more difficult. A distinction can be made between three sections in a curriculum (or teaching plan/programme):

a) The ***planning area***, in which the learning content, the qualification standards/competence goals, the overall length and distribution of the subject matter to be covered and the time required are specified. This "construct" of a training course, the syllabus, should if possible, be decided on by consensus in tripartite negotiations between the state and social partners. In reality, this has not been possible so far for many Central and Eastern European partner countries.

b) The ***implementation***, which involves incorporating the parameters (planning data) into a concrete schedule in which the content, linked with specific didactic concepts, are integrated into a schedule. In some countries this work is generally laid down as part of the national standard, in other countries it is undertaken on the regional level. In the case of extensive decentralisation and autonomy of training providers (schools, colleges or training companies) it is the responsibility of the teachers/trainers to do this in line with the local conditions. Some countries restrict the freedom of teachers traditionally to the choice of methods and teaching/learning aids (e.g. Germany) and leave them greater scope for the choice of content. In Denmark and the Netherlands training institutions are more or less autonomous.

   In Central and Eastern Europe there is still a strong trend towards national provision. In some cases, however, partially decentralised models have been set up, for instance in Hungary where 20% of the curriculum is defined locally or in the Czech Republic where besides the national specification of the "basic or core curriculum", the schools agree competence goals and contents with local industry which then reflect local conditions. Russia is also heading towards partial decentralisation.

c) ***Evaluation*** refers to the application of nationally agreed assessment criteria and procedures. In many cases, it is supplemented during the training course with formative assessment. The final assessment – whether it refers to a complete occupation model or a defined modular model - is almost always laid down at the national level. The result of these assessments form the foundation for the issuing of a nation-wide recognised certificate/diploma based on credit points.

   Accordingly, formative assessment, which the teachers/trainers undertake within the framework of instruction/training in order to ascertain learning progress, are normally up to them or are agreed within the school/training institution. Sometimes intermediate assessments are laid down at national level, in other cases they are agreed at a decentralised level.

All components of a curriculum have a direct effect on the learning/teaching situation. They make up the formal framework within which individuals shape their learning process.

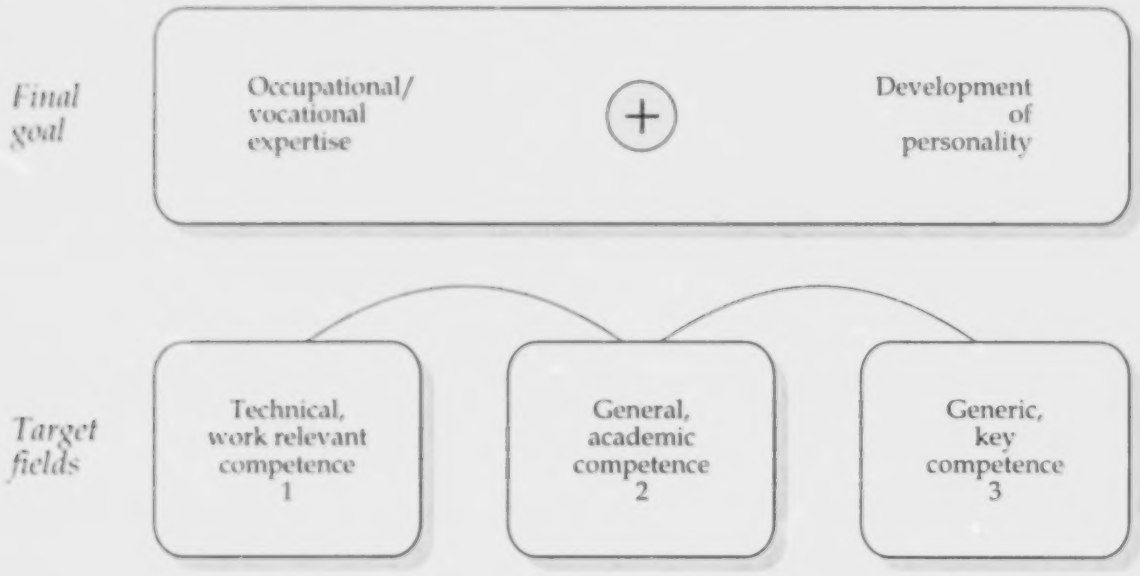
Of course, the understanding and functions of vocational training play an important role: What social goals are linked to it? What cultural traditions are involved? Many Eastern European countries attribute considerable importance to the teaching of general education content in vocational training, too. This is particularly true when the goal of a training course is a dual qualification: i.e. the certificate which confirms occupational competence as well as the diploma which opens the door to higher education. In many countries which adopt dual qualifications, a certain percentage of young people is earmarked in advance for this dual qualification (around 20 - 25%).

With a goal of this kind, the curriculum has a structure and content which are completely different from traditionally narrow and specialist vocational training. This applies to job-based qualification standards or when they have subordinate functions as may be the case in craft trade training. In Western Europe the focus is clearly on occupational competence. General content as a rule is reduced to a minimum. This has led spontaneously in Central and Eastern Europe (e.g. in Russia and Bulgaria) to a rejection of training in craft trades even after 1990 although a market economy deems craft trades to be a very important sector. Only after training in craft trades had been "upgraded" by adding general content did it meet with approval - initially in pilot projects.

Another central discussion point in vocational education and training has to do with its contribution to individual personality development. In Western Europe this has been a subject of very heated debate for a long time: the reduction of vocational education and training to pure "skill production" was set against personality-oriented training. This discussion is now taking place in Eastern Europe

too. The "economic" consideration of vocational education and training, which aims to provide the right in-company competence just in time, met with a positive response in a few Central and Eastern European countries at least at the beginning of the transformation process. This orientation was seen as a major step towards the market economy design of vocational training and a move towards discarding the "ballast" of training under a planned economy. In this form, personality development had a permanent place although it was oriented towards the socialist image of mankind. An approach of this kind can increasingly be observed in Central and Eastern Europe. It involves finding a new balance between occupation and work related competence acquisition and individualised personality development oriented towards democratic principles (cf. Fig. 8). Central European countries in particular pursued this path not least because of their future membership of the EU.

*Fig. 8: **Major target fields of vocational education and training***

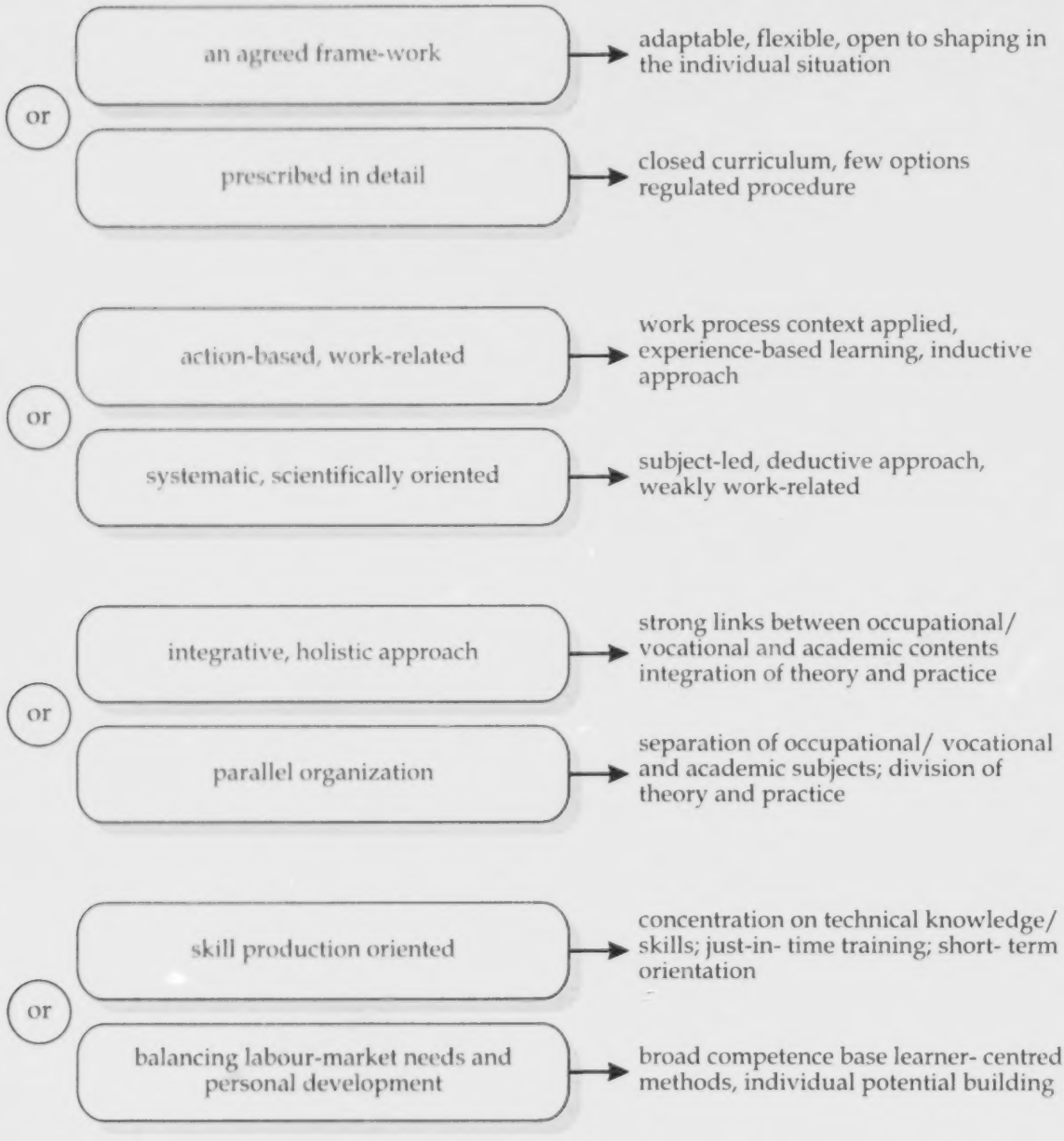


This twofold goal has a major influence on the curricular concept adopted, i.e. on that gives some scope to individual shaping. Learning-oriented methods replace teaching-oriented instruction. The conscious promotion of individual strengths and the targeted overcoming of weaknesses of the trainees are as much part of the tasks of the teacher/trainer as the successful transfer of the necessary occupational/vocational competence. At this point, however, many Central and Eastern Europeans come up against a central problem: the training of teachers at universities in many cases is still oriented towards the traditional approach. Employers, to the extent that they are (can be) involved at all in vocational education and training, concentrate on workplace-oriented training. Only in a few countries has there been a major change in teacher training beyond pilot projects. But this will make or break the success of reforms.

Figure 9 gives the typical characteristics of contradictory curricular concepts in order to document the wide range.

Fig. 9: Features of contradictory curricular models in vocational education and training

The curriculum is


an agreed frame-work
adaptable, flexible, open to shaping in the individual situation
or
prescribed in detail
closed curriculum, few options regulated procedure
action-based, work-related
work process context applied, experience-based learning, inductive approach
or
systematic, scientifically oriented
subject-led, deductive approach, weakly work-related
integrative, holistic approach
strong links between occupational/ vocational and academic contents integration of theory and practice
or
parallel organization
separation of occupational/ vocational and academic subjects; division of theory and practice
skill production oriented
concentration on technical knowledge/ skills; just-in- time training; short- term orientation
or
balancing labour-market needs and personal development
broad competence base learner- centred methods, individual potential building

These models have been presented here in simplified form in order to highlight the differences. In reality we again encounter mixed or interim forms. In Western Europe the most common curriculum form has the following characteristics:

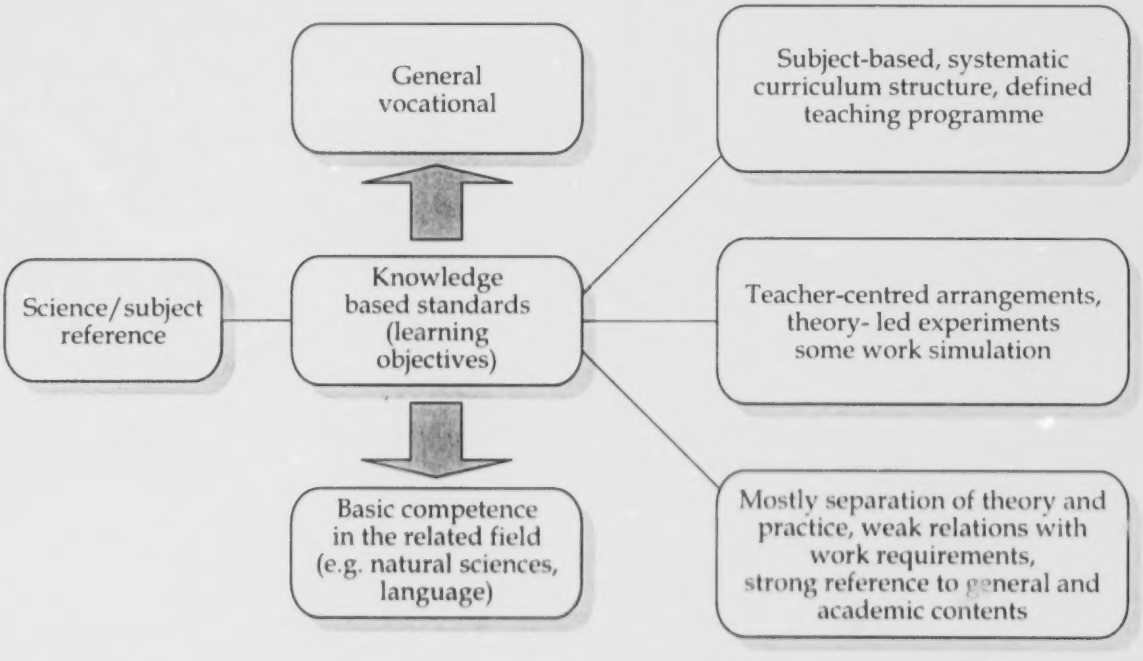
- agreed framework, open for adaptation and situational requirements
- action based and work related with many opportunities for experience based learning
- integrative, holistic approach, occupational/vocational content and general and academic subjects are linked, theoretical education and practical experience are strongly connected

- balance between education and training for labour market needs and the development of the individual personality.

It should be clearly stated that this very attractive, frequently suggested concept, within the framework of Phare as well as in bilateral programmes, has not been successfully implemented on a broad basis even in many EU Member States. Its spread in Central and Eastern Europe seems to ignore national features in many cases, current restrictions and enormous transformation efforts currently being undertaken there. School-oriented curricular concepts continue to dominate as they did before (cf. Fig. 10). They are primarily based on the classical subjects which mainly focus on laying the foundations for an area of activity (general vocational qualification standards) even if efforts are being made to implement an occupational model or a modularised occupation model and the political goal is greater demand orientation in vocational education and training.

Fig. 10: Features of a typical subject-based curriculum in vocational education and training

School-based vocational education and training (with little or no cooperation with industry)

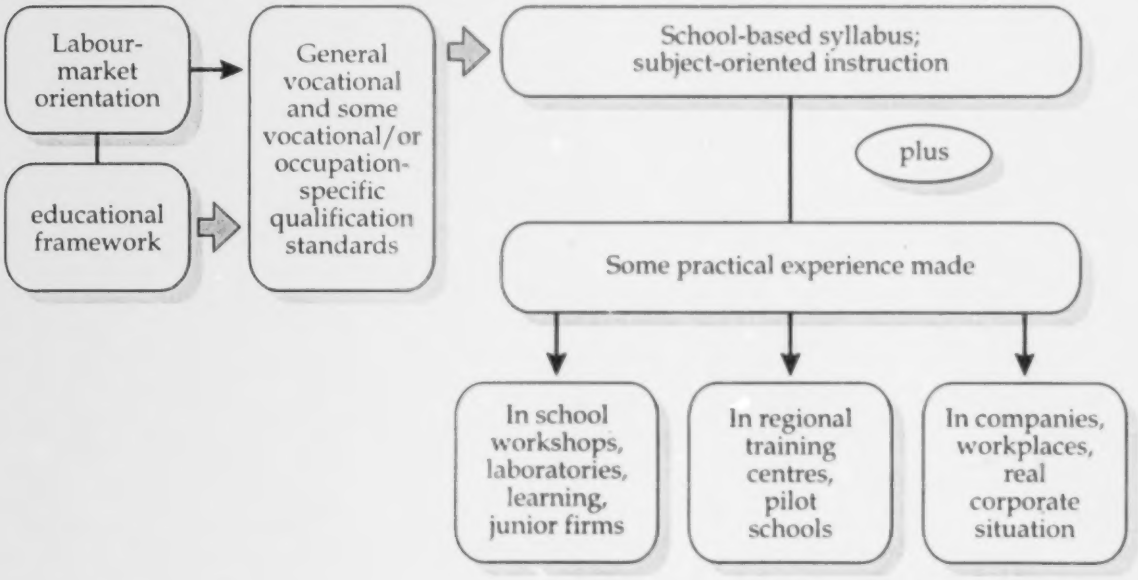

General vocational
Subject-based, systematic curriculum structure, defined teaching programme
Science/subject reference
Knowledge based standards (learning objectives)
Teacher-centred arrangements, theory- led experiments some work simulation
Basic competence in the related field (e.g. natural sciences, language)
Mostly separation of theory and practice, weak relations with work requirements, strong reference to general and academic contents

There is hardly any co-operation with (state) enterprises - in the past an accepted system characteristic in some Eastern European countries like Russia, the Ukraine, Bulgaria – due to the market orientation of industry and economic pressure. Small and medium-sized enterprises are not involved, or involved very little in vocational education and training, not least because of the lack of relevant training competence but also because of their focus on short-term competition. Hungary, for example, which had envisaged dual co-operative training in line with its Vocational Training Act, amongst other things has suffered a quantitative setback. Just under one-third of young people are receiving instruction in schools and companies. There is a clear trend towards school-based vocational education mainly because of the conditions dictated in conjunction with World Bank loans.

Consequently, school-based curricula are clearly in the majority even if political decision was in favour of demand and industry driven vocational training. However, in order to meet the requirements of the world of work, modern training workshops, practical training centres and learning offices have been set up in schools with the help of resources from the advisor countries or existing ones are being modernised and upgraded. Furthermore, there are occasional work placements in companies. The involvement of work and experience oriented learning phases requires a corresponding curricular concept and continuing training for teachers/trainers which so far has only been undertaken on any significant scale in pilot schools. Only a few countries have so far developed effective dissemination strategies (e.g. Estonia, Poland, Slovakia, the Czech Republic and in some cases Russia). This has ensured a greater spread and also a nation-wide implementation of the new "mixed" curricula. Instruction coupled with periods of experience driven learning and work-related simulation have remained rare up to now. Furthermore, many schools do not have the necessary resources.

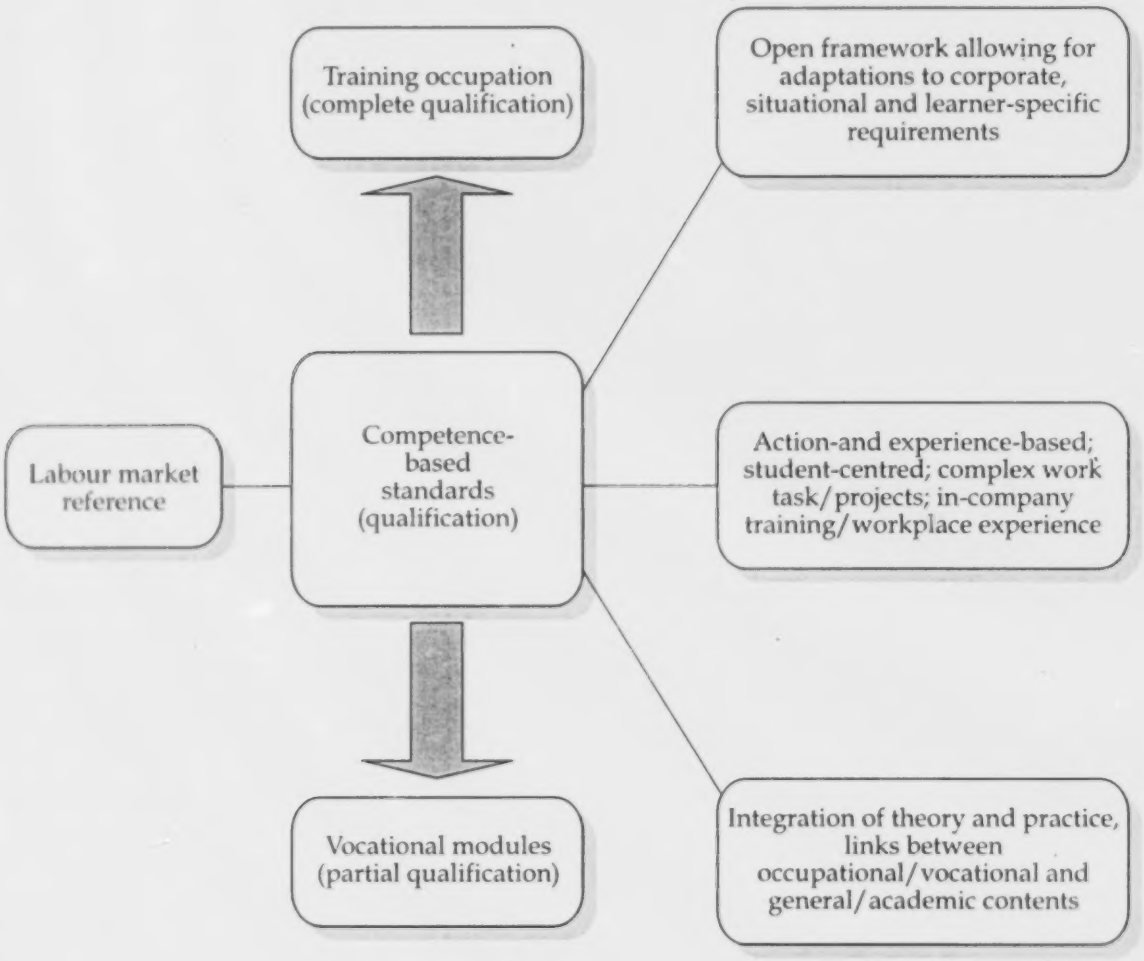
Nevertheless, this "mixed" curriculum concept which integrates practical experience (cf. Fig. 11) seems to be the most promising in the current situation. The practical elements should be agreed at local level in line with the opportunities available in situ. A minimum percentage of training time could be laid down for practical experience. In this context it is left to the regional local decision-makers to decide whether this practical experience should be offered in in-school workshops/learning offices, regional training centres or companies.

Fig. 11: School-based curriculum combined with a minimum of practical experience


Labour-market orientation
educational framework
General vocational and some vocational/or occupation-specific qualification standards
School-based syllabus; subject-oriented instruction
plus
Some practical experience made
In school workshops, laboratories, learning, junior firms
In regional training centres, pilot schools
In companies, workplaces, real corporate situation

Curricular concepts for dual, co-operative or alternance vocational training are by no means common in Central and Eastern Europe and normally encountered only within the framework of support programmes or thanks to the special initiative of an economic sector (e.g. banking and insurance). The (ideal) characteristics of a curriculum are presented in Fig. 12. It is demand-oriented but at the same time creates a good general education competence basis and allows personality development. However, this can only be achieved under favourable economic conditions and with corresponding political backing. The current situation in Central and Eastern Europe up to now has scarcely permitted this and even the economically successful countries have only taken this step in exceptional cases.

Fig. 12: Features of an open, demand-led curriculum in a dual vocational education and training system


Cooperative (dual) vocational education and training system: enterprise and school
Training occupation (complete qualification)
Open framework allowing for adaptations to corporate, situational and learner-specific requirements
Labour market reference
Competence-based standards (qualification)
Action-and experience-based; student-centred; complex work task/projects; in-company training/workplace experience
Vocational modules (partial qualification)
Integration of theory and practice, links between occupational/vocational and general/academic contents

2.5 *Modularisation and modular concepts*

The term "module" (building block, assembly) originally stems from technology/production and "modularisation" is the term used to describe a process which permits the manufacture of final products more easily and more cost effectively. They have increasingly spread into other areas, including vocational education and training. Teaching and learning materials, for example, were designed many years ago as **"modular systems"** in order to facilitate their use in a more flexible and differentiated manner (compared with rigid teaching material). Given the growing heterogeneity of learning groups, the rapid change in the requirements of industry, the emerging plurality of vocational training providers and a major trend towards short-term attitudes in industry, flexibility, differentiation and dynamics are what is required. Modules and modularisation are deemed to be effective instruments in order to achieve these goals.

In *Manual I* we drew attention to the trend towards "modularisation" in vocational education and training and described the "modularised occupation model" as a fourth basic model of a vocational standard. It has been well received by international experts in both east and west. The Phare and

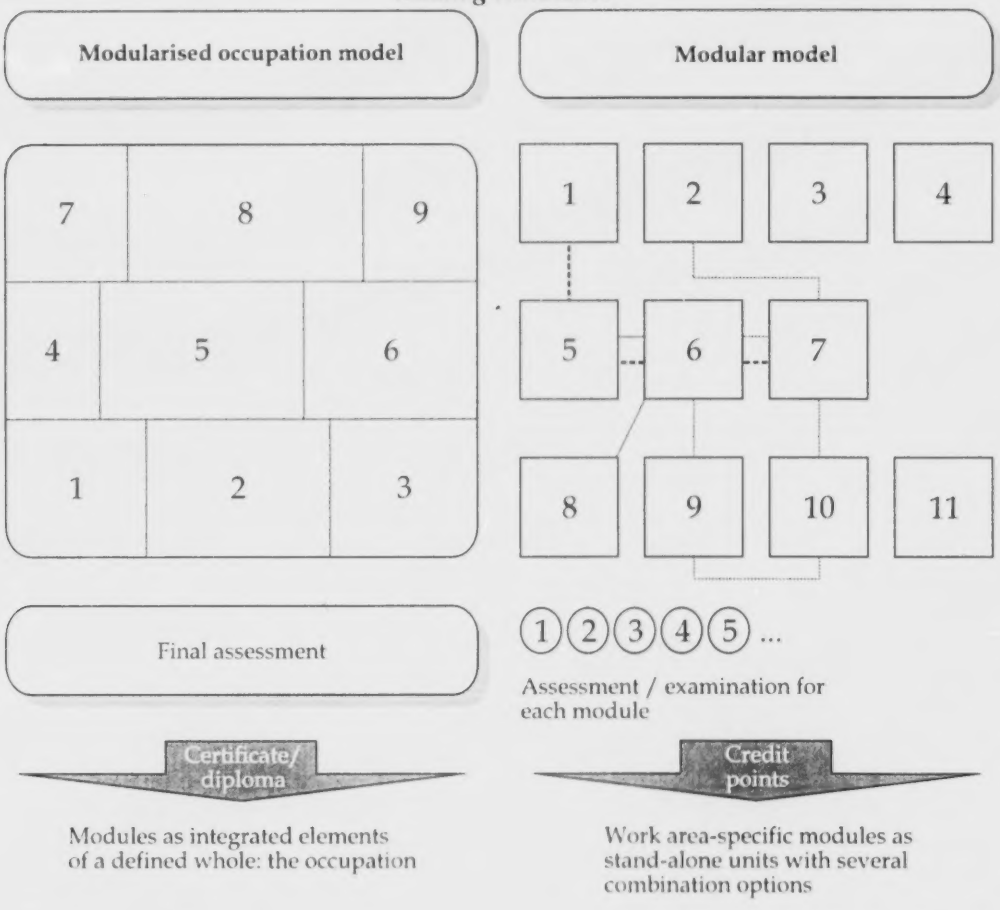
European Training Foundation "Standards" working group have agreed on the recommendation "that structuring curricula in a modularised way could facilitate the development of new occupational standards and the achievement of educational objectives"[10]

Mainly didactic modularisation, as mentioned above, is not new and not in dispute. In this context a complete training course is broken down internally into viable training units. It leads to a final assessment in which the overall competence is recorded and certified. The critical aspect of modularisation under discussion in both Eastern and Western Europe, is not linked to this but to two important regulatory issues:

1. Are the sections (within a training course) to be tested and certified separately or is a final assessment stipulated?
2. Can the reverse path be embarked on, i.e. we don't start with a whole (a training occupation) and break it down into parts ("structuring principle"), but rather define parts which can be put together to form one or more wholes (occupations or competence bundles) ("construction principle")?

Figure 13 presents these two basic models: on the left the "modularised occupation model" (**structuring principle plus final assessment)** and on the right the "modular model" which defines individual units (modules) which can be separately assessed and put together to form various wholes (**construction principle plus individual test**).

Fig. 13: Modularization - two concepts, based on different vocational education and training rationales



10 (H. Schmidt, 1998, p. 10).

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These basic models follow their own independent logic with the ensuing consequences both for the didactic process as well as for the overall target competence. Hence, both on the scientific and on the didactic level, there is a dispute about the "better path" although, in recent years, opinions do seem to be converging. Both models have advantages and disadvantages.

The structuring or construction principle is not the sole distinguishing feature of modular concepts. The United Kingdom's NVQ system, for instance, is a modular system (structuring as well as construction principle) which primarily defines the **outcome**. The module (called a "unit of competence") defines the competence which has to be demonstrated and assessed. Furthermore, "modular models" are conceivable and are practised in which, besides outcome and assessment requirements, the content, methods and timeframe are also part of the standard. In these cases **curricula for the modules** are developed. These are either made compulsory or are made available as support for vocational training practice. "Training packages" of this kind for defined competence/qualification are being prepared for example in Australia in order to close the gaps between requirements (learning goals) and assessment (outcome). Lithuania has also adopted this approach and has already put together an impressive number (around 170) of "teaching-learning packages" for modules.

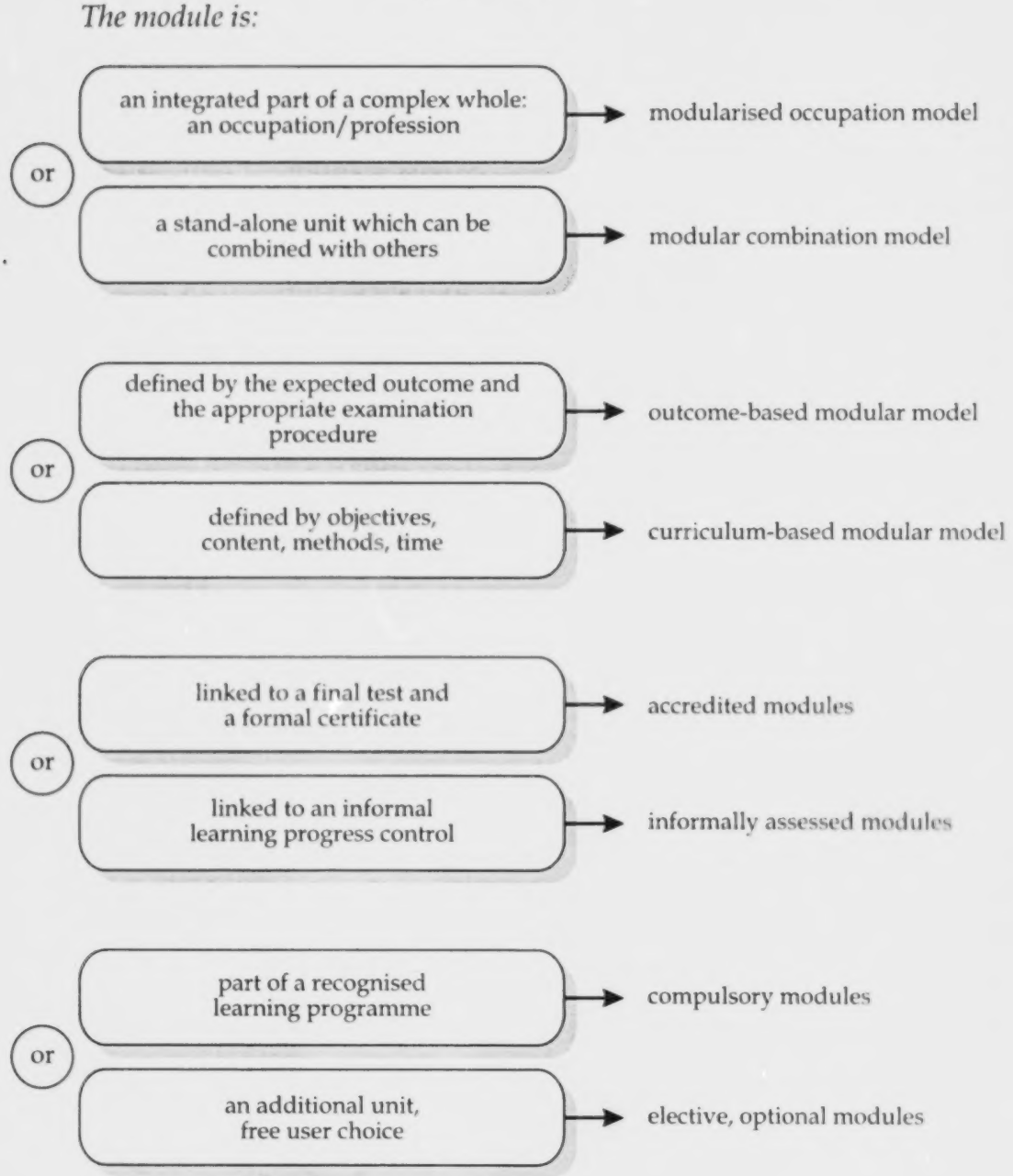
Another distinctive feature is **formal recognition** and crediting of competence acquired in a module/training unit and then tested at the end. This is the approach adopted (to an increasing degree) in east and west. Other countries have adopted informal learning progress control in school or in the company. The latter is usually the case when modules are an integral part of an overall training course leading to a final assessment. By contrast, modules which are certified and formally accredited have the character of independent, closed training units.

Finally, attention should be drawn to the difference between **compulsory and optional modules**. The modules which must be combined to constitute a competence profile of an occupation or an activity/functional area are compulsory. The trainee must do them all either systematically according to the valid curriculum or broken down over a longer period in what is a "limited" flexible sequence. Parallel to this in recent years freely selectable learning units (modules) have grown in importance. In this way **additional qualifications** are provided in order to cover company specific needs or to improve the individual's chances on the labour market. Furthermore, "additional qualifications" are an opportunity to build up an individual competence profile which eases the transition from vocational education and training to university education.

Additional qualifications are an important and positive instrument for the differentiation and flexibilisation of vocational education and training from the perspective of industry, training providers and the individual. They help to keep pace with the rapid changes on the labour market (e.g. in countries facing stiff international competition). Furthermore, they can be used against the backdrop of an unclear and unsure development of national industry (e.g. in countries with major economic restructuring problems). Besides a compulsory curriculum which refers to the current situation, optional, supplementary models are offered if there is corresponding demand. If they have proven their worth and are relevant for the labour market, they will be included in the compulsory curriculum after the next review.

Figure 14 gives the various characteristics of modules and modular concepts in vocational education and training.

Fig. 14: Features of opposite types of modules/modular models in vocational education and training


The module is:
an integrated part of a complex whole: an occupation/profession
modularised occupation model
or
a stand-alone unit which can be combined with others
modular combination model
defined by the expected outcome and the appropriate examination procedure
outcome-based modular model
or
defined by objectives, content, methods, time
curriculum-based modular model
linked to a final test and a formal certificate
accredited modules
or
linked to an informal learning progress control
informally assessed modules
part of a recognised learning programme
compulsory modules
or
an additional unit, free user choice
elective, optional modules

Modular concepts have been introduced in two Baltic States - Estonia and Lithuania. Because of its strong economic orientation, Estonia has come out in favour of relatively narrow modules tailored very much to current company needs.

Lithuania, too, in a short space of time has implemented a remarkable modularisation programme for a large number of curricula in nine vocational areas. The resulting modules, however, are not linked to a recognised national system of qualification standards. This impedes their value both on the labour market and within the training system.

Hungary has just undertaken another curriculum reform which documents its loyalty to modularisation.

The Czech Republic sees the modular approach as an opportunity to take up local requirements and company specific specialisations which are defined and offered in a decentralised manner alongside the compulsory "core curriculum".

Overall, it can be said that many Western European countries are thinking about modularisation and that many parts of vocational education and training are being restructured, not to mention the NVQ system which was the main driver behind this development.

3. Current experience in developing vocational standards in Central and Eastern Europe and recommendations

3.1 What has been achieved so far in standards development?

In the previous sections we repeatedly referred to what has been achieved so far in Central and Eastern European countries. We focused on highlighting the diverse approaches adopted and on classifying and grouping them as far as possible in order to identify typical procedures (basic models). Based on the Foundation reports available to us on standard and curriculum development and our own project and consulting experience, we can observe by way of summary:

1. The fixing of vocational education and training standards (job-based, occupational, vocational, general vocational) is undertaken in many countries from an educational perspective or is based on what is in many cases a very **narrow database of business requirements and labour market developments.** Only in exceptional circumstances can data of this kind already be systematically collected and made available for training planning. Aside from a few exceptions, there is **no established procedure** for data processing, discussion with the **social partners or** the agreement of vocational education and training standards at national level. In this context reference is made to a practical and really simple method in order to lay down vocational education and training standards: the **DACUM method** ("Develop a Curriculum"). It was developed in North America. This procedure involves bringing together a small group of representatives, normally between 5 and 8 practitioners of an occupation, and agreeing with them the necessary work activities over a period of 2-3 days and on the basis of a specific procedure. This leads to an occupational profile which can form the basis for curriculum development. It can then be supplemented with aspects of general and occupational/vocational competence[11]. In order to adapt the requirement profiles to new developments and to take them beyond the traditional level, it would be conceivable to bring a few competent foreign experts, for instance from EU Member States or advanced countries in Central and Eastern Europe, into the DACUM seminars. Furthermore, they could then be compared with the training profiles made available by CEDEFOP.

2. In the last few years many curricular and didactic-methodological reforms have been instigated. These innovations frequently remained "isolated" at the implementation level. They are not linked to corresponding **political system decisions. The "bottom up"** approach, which is certainly desirable and necessary, must be coupled with a corresponding "**top down**" approach. Legislation on vocational education and training and fundamental agreements are necessary in order to move forward from the phase of search and test to a phase of implementation and **stabilisation** with clear training goals. However, this is exactly what is missing in numerous countries because of repeated political changes or because vocational training was not deemed to have priority.

11 cf. in detail: "Development of a System of Occupational Standards, Testing and Certification in Turkey", Federal Institute for Vocational Training (BIBB) in 1997. In this project the DACUM method was used in a slightly amended form.

3. The **implementation of vocational education and training standards** (and related curricula) is equally incomplete. Undoubtedly implementation is a complicated procedure even when there is an up and running **vocational training infrastructure.** Most countries do not have this and even when they do, it is only in a very basic form. Hence, modernisation is restricted to a series of pilot projects which have far more favourable preconditions thanks to special support than the majority of institutions responsible for vocational education and training. **Further training for teachers** does not come up to scratch either. Too few funds are available for this.

4. The evaluation undertaken by the European Training Foundation's expert group also confirmed that the transformation process in Central and Eastern Europe is going in different directions, at different speeds and levels of efficiency. **Country specific advice** is, therefore, necessary which is based on the actual situation in the country and not on the wishes or even the "ideals" of western advisory and host countries/institutions. Even where there is a traditionally high level of research in some countries in the field of pedagogics and learning psychology (e.g. Poland and Russia), its contribution to the reform is very limited. Academic circles are scarcely involved or the corresponding institutions have been cut back dramatically. Up to now, no general and viable statements about the suitability of processes and results of standard development tested so far (competence goals, curricular, assessment procedures) in Central and Eastern Europe can be made. Of course, isolated cases of successful, forward-looking projects can be identified everywhere, but they are not enough to ensure that the reform will be a success.

5. The partner countries do see the need for an **ongoing review of the content** of standards. In future, they wish to see more practical elements incorporated into the traditional, mainly in-school training. They think that (didactic) modularisation based on an occupation model will increase flexibility and simplify the updating of curricula. They are testing the **acceptance** of new vocational education and training standards mainly in school institutions (with teachers and pupils). As a rule, there is no systematic **feedback from the labour market, or from companies**. For that they have little or no research capacity. Nevertheless, young people with commercial training or knowledge in modern technologies - in the same way as teachers qualified in these subjects - are still finding it very easy to get jobs despite the difficult employment situation in many countries. Hence, there is a clear demand.

6. Economic restructuring leads to unemployment. Countries are now facing problems they have been unfamiliar with so far and there is no solution in sight. Qualification and retraining are indeed suitable instruments in order to improve the situation but for that they need additional funds which they don't have as suitable qualification demand estimates. There is still not enough **attention being paid to unemployment** (structural change/economic weakness) when laying down priorities and standards development (which occupations, which areas of activity should be given priority?). Even the rapid (uncontrolled) qualifications for currently "popular" occupations/areas of activity deemed to be attractive very soon reach the market limits. In many cases there has been a return to standards development for **self-employment** (entrepreneurship) but this also requires supplementary information and advice. Particularly in this area there is known to be a considerable professional deficit in many Central and Eastern European countries. What is involved in entrepreneurial activity is often underestimated.

3.2 *Different problems - differentiated support*

In Central and Eastern European countries (and the New Independent States) vocational education and training was and still is a component in the economic and socio-cultural system. There is no difference between these countries and Western Europe. Prior to the dramatic political upheaval at the beginning of the 1990s, the main characteristic of these countries was first and foremost a planned economy and a centralised orientation despite considerable national differences. Apart from a few exceptions there was no demand-oriented vocational training. Nor was there very much training in the craft trades, clerical and service occupations. The practical part of training was also provided in state vocational schools plus a few large enterprises which also participated. Traditionally, general education leading to university entrance requirements had a higher standing than an occupational qualification when it came to entering the labour market. There has been almost no change in this situation despite considerable investment by the EU and the impressive occupational successes/careers of graduates who have completed updated vocational training (in pilot projects).

European Training Foundation studies and experience in Central and Eastern Europe have shown that the **financing of vocational training** by the state has often fallen as a consequence of the precarious nature of state finances to a level which scarcely even guarantees the survival of existing institutions or (suitable) payment of training staff. Closures of vocational training institutions beyond the necessary concentration and profiling, dismissals or migration of qualified teachers/school directors are just as much a daily occurrence as are the completely outdated equipment and lack of up-to-date learning and teaching materials. Similar starting conditions at the beginning of the 1990s as well as the weak financial situation encountered everywhere in the field of training should not however lead to all Central and Eastern European countries being treated in the same way. **National differentiation** inside the former "eastern block" is up and running. The levelling training policy of the past has left behind major imprints but it has by no means destroyed cultural specificities, educational traditions or national economic foundations. They are re-emerging clearly and shaping reform efforts. Hence, the situation of vocational education and training in Central and Eastern Europe varies considerably. This must be borne in mind and differentiated training offers made.

In line with their general level of political and economic development and the transformation of vocational education and training, three groups can be identified.

1. **A first group of countries** can be identified as **"pioneers". On the basis of the new overall vocational training concept, modern vocational education and training standards can be developed and gradually implemented. These countries already have a lot of experience in the necessary labour market and vocational training research. They have several opportunities for involving the social partners. Economic development is positive, in some cases even above average compared to the EU. Nevertheless, investment in vocational training is somewhat reticent and inadequate which imposes a strain on the reform process. This group includes Estonia, Poland, Slovenia, the Czech Republic and Hungary.**

2. The **second group of countries** can be characterised by the fact that they traditionally have research institutions, continuing training and education institutions in **vocational training** but these have been **considerably reduced** which means that they can only exercise their role to a limited degree, if at all. The redevelopment or establishment of these institutions with European funds (Phare, Tacis, bilateral promotion) and international loans is an important step. It does, however, require **sustainable national support** both in financial and political terms if these institutions are to assume their functions, in an ongoing and effective manner, in the

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restructuring and modernisation of vocational education and training. National support is however inadequate. Furthermore, what is often missing is a well-defined, statutory reform concept. Political circles have not yet adopted a clear stance. Many individual attempts exist alongside one another. The transformation process will, therefore, depend on **personal initiative** and regional arrangements. Economic and political instability merely serve to exacerbate the situation.

This second group of countries includes Bulgaria, Romania, Russia and the Ukraine. In principle, Russia has positive preconditions (from its earlier situation and capacities) which however, are not proving positive as a result of the numerous overarching problems the country is facing.

3. The **third group** mainly consists of the **successor states to the former Soviet Union**, such as Kyrgyzstan, Moldova or Turkmenistan. Given their very **weak and monostructured economies**, the lack of a vocational training infrastructure (earlier dependence on central government in Moscow), and a limited research capacity, the transformation process in these countries was launched from a different starting position. This must be borne in mind in future co-operation. The same yardsticks cannot be applied or the same objectives pursued as in the case of the other two country groups. This applies to the vocational education and training standards to be developed, the length of training to be envisaged (3 years or more are not realistic for these countries), the target level and the technical requirements. Many of these countries have an agricultural economy, their industry is at a comparatively low technological level and many groups in the population are active in the informal sector. Here fundamental help must be given.

This very rough classification stresses yet again that differentiated strategies, different priorities, country specific concepts/models are necessary if any positive effects are to be achieved. Otherwise, support will pass by the needs of these countries: in some cases remaining below the target and in other cases exceeding it by far.

3.3 *Conclusions and recommendations*

Based on this, we have formulated separate recommendations in the following section for each of these three groups. What should be the next priority steps?

3.3.1 *Measures for country group 1: Dissemination and differentiation*

Many of the Central and Eastern European countries in group one are candidates for accession to the European Union. They have identified their goals and are making considerable efforts to meet the preconditions for the EU. Their support within the framework of the Phare Programme is coming to an end. After their first experiences in the EU programme "Leonardo I" they are to take part (also financially) as equal partners in "Leonardo II". They will also be involved in transnational projects organised by the European Social Fund. Hence, fundamental issues for the definition and development of standards in vocational training will no longer be at the fore in their case but rather the evaluation, ongoing updating and further development of vocational education and training standards as well as their effective incorporation into learning and teaching processes.

Based on the joint projects in the Leonardo programme and the European Social Fund, subjects and occupational areas, which are of priority in the Member States, will also move more to the centre of their innovative activities. This promotes the European process of integration. All the same, there is a risk that in these reform countries a "pilot group" will increasingly emerge and set itself apart from the majority, the "mainstream". There is already a clearly discernible trend towards "segregation". The pilot schools are developing their own dynamic, their own understanding and their own topical standards, which do not apply to the majority of vocational training institutions. They wish to maintain their (privileged) special status which is known to prompt a situation in which there is scarcely any systematic dissemination of results, concepts or new ideas from these sites.

Conclusion: the support of networks, systematic exchanges of experience, the elaboration and the dissemination of materials/aids for the nation-wide implementation of demanding and forward-looking vocational education and training are priority measures.

Besides the focus on sustainability and dissemination of reform approaches, an important role is played in this group by the application of modern didactic concepts, from "open, action-oriented curricula" to the elaboration of suitable teaching and learning materials for day-to-day practice. They support teachers in trying out new methodological paths and promote increased discussion about the quality of vocational education and training and how to safeguard it. Standards, whether narrow or wide, are only of value if they are complied with and practised. Research is necessary in order to establish a link to experience on the implementation side and to assess the value of the new competence profile on the labour market.

Conclusion: intensive continuing training of teachers/trainers is necessary in order to make them "fit" for modern, pupil-oriented and action-oriented didactic methods. Closer co-operation with polytechnics/universities is necessary in order to ensure that teachers are familiarised from the very outset with the new guidelines and concepts of vocational training. Labour market related research should be reinforced. No vocational training planning or implementation can do without it.

In some countries, there are already different strands in vocational education and training (subsystems) in which specific competence profiles and levels are pursued and corresponding curricular concepts applied. There is an increasing demand for various training paths leading to specific certificates or a modular system which passes through different training paths. The task here is to guarantee transparency between the various strands in the overall system and to avoid "training dead ends". Efforts should be made to establish a link between the general (academic) and vocational training sub-systems.

Conclusion: differentiation of the training system and high permeability call for clear provisions concerning the recognition of (sub-) certificates and their recognition in later training courses. Hence, supraordinate agreements are to be entered into between the state and social partners on the one hand and training institutions (schools, grammar schools, colleges, polytechnics, universities) on the other. The results must then be accepted both by the students (and their parents) and by the companies.

3.3.2 *Measures for country group 2: Focusing and stabilising*

The wide range of advice available, in some cases "over-advice" means that partner countries often have different, frequently incompatible, even competing concepts and models. Furthermore, private providers from home and abroad are entering onto the markets and creating, testing and certifying their own "concepts" and "standards". This increases the range of alternatives and ensures greater plurality but brings with it the risk of fragmentation, lack of transparency and a lack of direction. In countries in which so far there has been no overall concept for vocational education and training and no statutory foundation, steps of this kind can have a negative effect.

Conclusion: a focus on selected models/concepts for VET standards, curricula, organisation of vocational education and training is necessary. If at all possible, one version should make up the future "mainstream" which is accepted nation-wide and becomes a frequently practised form of vocational training. In order to avoid complete breaks which could impose a strain on the reform process, use will be made of socially accepted basic models (e.g. mainly in-school education linked with work placements and the "occupation model"). A legal basis is necessary in order to steer reform efforts in the right direction ("mainstream") and to pool the limited resources.

This is the only way of achieving stability. By increasing the scope for decentralised decision making at regional/local level, inflexibility and chaotic standardisation can be avoided. Large countries or countries with very different economic regions (e.g. partially agrarian structures, partially highly industrialised) will profit from a decentralisation (deconcentration) of some of the vocational education and training standards/competence profiles and curricula. This will then reflect the economic requirements as well as the socio-cultural specificities of a region without the supraordinate national system framework being jeopardised.

Conclusion: a certain percentage of training time/curriculum (e.g. 20-30%) will be developed locally whilst maintaining the "core vocational education and training standards" / the "core curriculum". This implies that a compulsory "national framework" will have been established in advance.

There is no doubt that teachers, the main players in training practice, take on an important role in the transformation process. However, they should not be overburdened. Teachers are neither labour market researchers, nor do they normally have curricular competence. They have hardly any insight into economic processes and are not familiar with the reality of modern production and service sectors. Hence, it is not recommended that the focus should primarily or even exclusively be placed on teachers (who are known to have a strong traditional orientation) as the central drivers of curriculum innovation. Other occupational groups/experts should be incorporated into the reform process: e.g. economics, technical research institutions/universities, companies, professional associations and, last but not least, practitioners from industry themselves.

Conclusion: at regional level co-operation units/networks have to be organised in which the open sections of the vocational standard are jointly developed. A decision must be taken at local level as to where these co-operation units are to be based. The main precondition is that an institution accepts responsibility for the co-operative development and implementation of the (sub-) curricula and establishes contacts with the competent institutions on the national level (e.g. National Standards Board, National Vocational Training Institutes). Here the aim is to establish an exchange of experience with co-operation units in other regions and to guarantee a link to the local environment.

As a rule these regional co-operation units require additional financial support or an increase in their personal resources, despite the high level of commitment to be found in many areas. They are a major contributory factor to the implementation of the national framework for vocational education and training standards and to their regional/local adaptation. The transborder exchange of experience would also be important particularly since the regional specificities on the two sides of the national borders are often very similar and direct co-operation would be easy even if there could be political difficulties.

3.3.3 *Measures for country group 3: Institution and capacity building*

The results of the European Training Foundation's project "Standards 2000" reflect the fact that special approaches in this country group are required given their unfavourable framework conditions. Using the examples of Kyrgyzstan, Moldova and Mongolia the difficulties encountered in the development of vocational education and training standards were presented[12]. This group has the following framework conditions.

- Both in terms of quantity and quality, vocational education and training is underdeveloped in all three countries and comparable neighbouring states. There are only a relatively small number of state vocational training institutions with workshops for practical training, most of which are in poor condition and do not have sufficient work, teaching or learning resources.
- Existing companies, which supported vocational training prior to the political turnaround in some cases as "base enterprises" with a governmental mandate, have not shown any interest in either offering work placements for pupils or vocational training given the poor economic situation and the pressure to survive. Merely with a view to covering short-term personnel needs, financial or material support was given in a few exceptional cases to vocational schools or individual high achievers.
- Dwindling resources also reduced the already limited availability of vocational education and training. Consequently, far fewer young people than before can undergo vocational training. If they do manage to get a place, then they are trained according to the "old system" and thus cannot find a new (adequate) position on the labour market. Youth unemployment is on the increase.
- These countries have chosen quite different priorities not least because of their difficult economic situation; vocational training is at the bottom of the ladder.
- There is a shortage of experts in vocational training and in industry who can make reliable statements about qualification requirements for technical staff. The emergence of the first new company associations/chambers has done little to change this, since at present they are hardly in a position to assume training responsibilities. This applies equally to the new trade unions. Hence, there must first be fundamental investment in order to instigate the systematic development of vocational education and training standards. Otherwise these efforts will be too sporadic, unprofessional and will fall flat.

Conclusion: investment in the establishment of infrastructure and sufficient training capacity has priority in these countries. Planning, development and continuing training institutions, which undertake the necessary tasks (development of vocational education and training standards, curricula, assessment procedures) and at the same time prepare teachers (at least a few multipliers) for the new tasks are absolutely essential.

Without any targeted capacity building of this kind, these countries will scarcely be able to undertake the intended reform process in the near future despite the personal commitment of some individuals. Against this backdrop, concentration on a few selected sectors/work areas is recommended since any more extensive updating of vocational training will not be possible in the next few years. This selection will focus on the traditional and, at the same time, viable economic areas in these countries (e.g. agriculture, craft trades established on the domestic market like building, food supply and the existing and functioning manufacturing industry). In addition,

12 H. Schmidt - Expert Report 1998.

individual new forward-looking business sectors (e.g. tourism, software development) should be envisaged. For these selected sectors modern vocational education and training standards can be elaborated with special emphasis on country specific and local framework conditions. They must be incorporated into the training system there.

Conclusion: the gradual establishment of vocational education and training, which envisages different training levels and lengths (for example, one, two and three year training courses) must be envisaged in order to gradually improve the qualification structure amongst the population and establish priorities which support self-sufficiency and lead in selected areas to an improved position in international competition.

The quality and comparability of vocational education and training standards in these countries could primarily be oriented towards their own region (the neighbouring countries). A harmonisation of standards in line with the principles in EU Member States is neither realistic nor does it make sense. The living conditions in many neighbouring countries of the former Soviet Union are completely different from those in Western Europe. Priority should be given to more simple procedures for training standard and curriculum development. These countries cannot adopt the, in some cases, highly complicated approaches in Western Europe which have been shaped by the involvement of various interest groups and which only succeed because there is an established infrastructure, extensive provisions and considerable competence in this sector.

Conclusion: the copying of results from standard and curriculum reform in neighbouring countries in the region or from countries with a comparable level of development and similar economic structure can help them to overcome their own problems. An orientation towards more progressive countries or corresponding recommendations would overstretch them.

What is needed is a completely new and different advice strategy which aims to lay the foundation stones and establish the competent institutions. Failing this, the special measures undertaken by individual experts such as the pilot development of standards will merely be isolated experimental activities without any real effect.

4. Development of vocational standards in Western Europe (four examples)

4.1 FRANCE: Annie Bouder & Jean-Louis Kirsch

Definition of an occupational standard in France

4.1.1 What do you mean by a standard?

In France, the term "standard" is not used in the field of vocational training. The term closest to it is "**frame of reference**" ("référentiel"), developed at the beginning of the 1980s in the Ministry of Education. The use of the term has spread to most organisations setting up specific training curricula outside this ministry, in particular curricula for adults organised by the Ministry of Labour and those set-up in various industries.

Developing a frame of reference ("référentiel") is **one specific stage** in the conception and implementation process for training programmes in technical and vocational education, a process illustrated in the diagram below:

Fig. 15: The main steps in designing and implementing technical and vocational education

Forecasting trends in the training-employment relationship
Policies for diplomas by levels (vocational education)
Advisability dossier
Development of the diploma (standards, frames of reference)
Development of training programme content and recommendations
Institutional development (training of teaching staff, opening of sections, etc.)
Evaluation (pedagogical, institutional, by the labour market)
Forecasting

Overall, the objective of defining occupational standards is to emphasise **definitions of occupational performances**, from which requirements for training are then defined. Within the French training system, such an approach is a substantial departure from the former situation, which started with an academic and disciplinary definition of training programme content and considered occupational activity as the application of theoretical knowledge.

4.1.2 *What are the basic elements/features of occupational standards?*

When viewed in greater detail, the development process for occupational standards as applied to Ministry of Education diplomas distinguishes **three forms of frames of reference (référentiels)**:

- An **occupational activity frame of reference**, a document that describes an individual's activities in an occupational context in terms of goals, conditions and production methods;
- A **certification frame of reference** for the occupational field, which is a regulatory document describing the skills to be attained in that field. The document applies to skills assessment aspects in the same way as the occupational activity frame of reference applies to working situations. A diploma is awarded to attest to these skills; the certification frame of reference specifies the conditions and assessment indicators for the skills. It should be noted that only the occupational field is considered since the field of general knowledge is subject to another principle of definition and validation;
- The **assessment regulations** which lay down how skills are to be validated.

The **occupational activity frame of reference** *(référentiel d'activités professionnelles)* is organised under four headings:

1. The name of the diploma;
2. The field of activity, which includes:
   - a definition summarising activities and including information about what the diploma holder does, the type of working situation in which that individual is found and the end purposes of his work,
   - a description of the occupational context which concretely situates these job activities in firms and sectors,
   - the boundaries and relative importance of these activities. The boundaries indicate the operational functions in firms in which the diploma holder works and the main tasks performed by that individual and his autonomy. The relative importance of these activities is judged according to the most relevant criteria of the field in question;
3. The description of the activities, which distinguishes:
   - functions, which refer to sets of activities in the firm orientated towards the same goal (human resources function, finance function, maintenance function). A function has a collective character and directs an individual's activity,
   - the tasks which describe an element of an activity for an expected service, using resources available to the person and according to the requirements placed on him,

4. The environment for performing these activities, which includes three series of indicators;
   - means and resources,
   - expected results,
   - autonomy and responsibility.

The **certification frame of reference** *(référentiel de certification)* in the occupational field describes the skills in three ways:

1. Capabilities ("capacités") as a way to qualify general and transversal know-how (for example, the ability to analyse, prepare, communicate, implement);
2. Know-how ("savoir faire"), which, in this case, means the information held by the individual and related to his actions in the surrounding technical and social environment. This know-how can be understood by an outside observer only when that person watches the actions themselves and their concrete manifestations (words, gestures, transformation of objects, etc.);
3. Associated knowledge corresponding to the whole of the information held by the individual and relevant to the objects and the environment, the properties of these and the laws related to this environment.

A certification frame of reference (référentiel de certification) in an occupational field includes five elements:

1. a table that relates the occupational activity frame of reference and the certification frame of reference in the occupational field;
2. a skills summary which is the counterpart to the definition of activities;
3. a description of capabilities and know-how, which specifies what the trained person should be capable of, the conditions of implementation (the available resources and elements of the environment) and the evaluation criteria (the expected performance of the candidate);
4. a table of relationships between the individual's know-how and associated knowledge;
5. a specification of the associated knowledge, describing the ideas and concepts involved and the limits of the knowledge required for the examination.

The **assessment regulations** *(règlement d'examen)* define:

1. the nature of the tests;
2. the form of the assessment (written, practical, oral, during training);
3. the coefficient assigned to each test;
4. the duration of each test.

Each test is modelled according to the skills that it assesses, the associated knowledge that it validates, the medium through which it is administered and the nature of the performances expected of the candidate.

4.1.3 *Is there a national compulsory list/classification of occupation standards?*

In the French situation, answers to this question can be advanced at two levels.

a) Awarding a diploma or a certification is tied to respecting the prescriptions defined by the certification frame of reference and the assessment regulations, texts that are legally binding. The occupational activity frame of reference is not a compulsory prescription as such, in so far as its recommendations are meant to be implemented in both the certification frame of reference and the assessment regulations related to it.

b) On the other hand creating a new diploma or a new certification involves defining specific frames of reference. However, a movement has recently appeared to institute the use of an obligatory list of frames of reference (corresponding to a descriptive repertoire of existing jobs) by which all new training programmes should be positioned. Associating these frames of reference and jobs has been attempted along these lines, but the exercise has brought up problems of constructing correlation between occupational classification and training classification and between the homogeneity between detailed description of occupational activity and the content of training programmes.

4.1.4 *Functions of occupational standards in France*

Five essential functions have been devolved to occupational standards:

- ***orientation and political supervision.*** As we have pointed out before, the purpose of this function is to proclaim the desire to give priority to the vocational dimension of training, to point out the effort to take job realities into consideration and thus avoid an overly pedagogical view of a diploma;
- ***mediation*** between the various partners involved in designing and developing a diploma (see point 5), offering a working method and frameworks of analysis to them;
- ***methodology*** that permits harmonisation in the process of elaborating diplomas, their assessment procedures, whatever their specialisation or level;
- ***documentation*** used by teaching staff in order to better understand the vocational goals of the diploma and thus to adapt the training that they provide;
- ***information*** to organisations and specialists in career guidance, human resource managers in companies and all those interested in the vocational objectives of a diploma.

From this list the absence of an important element emerges, namely the person who takes the training programme. Although the system in place seems to cover the setting up of a contractual approach between the teacher and the student, this dimension is not mentioned anywhere. This absence can be interpreted as a tendency of the French system to poorly mobilise student responsibility and commitment and to accentuate the restrictive obligatory aspect of studying.

On the other hand, although the first three functions are currently fulfilled correctly, the last two are much less so. The execution of these functions presupposes the principle that the occupational activity frames of reference are widely disseminated, which is not the case. These documents do not have the legal and regulatory force of the certification frame of reference or the assessment regulations, they appear only in abbreviated form, if at all, in official documents presenting diplomas, and very often they remain internal documents in those bodies creating or renewing diplomas.

4.1.5 *How compulsory are occupational standards in your country?*

Generally, standards are applied throughout France, but some of them only pertain to one industry.

As we have already stressed before, (point 1, Is there a national compulsory list/classification of occupational standards...?) occupational standards (*la démarche par référentiels*) can be considered to be compulsory within the training system. This quality has been inherited from the French scholastic tradition, which was founded on what could be called egalitarian selection to the extent that everyone takes the same tests in a system that assigns those with the best test results to the most prestigious training programmes. One might think that in emphasising final vocational goals in training programmes rather than their theoretical content, occupational standards try to combat this traditional model. The results are, however, very marginal.

As adult training has developed and life long training has been encouraged, there has been a movement to adapt assessment regulations. It has consisted in dividing assessments into units, grouping them into autonomous tests - four for all diplomas - which can be taken over a period of several years. Along with the use of validation for professional knowledge (*validation d'acquis professionnels*), it is possible to be awarded a diploma by equivalence (meaning that the candidate does not take tests) for one or several units, but never for the entire credential.

Conversely, the binding nature of occupational standards with respect to the labour market is much less explicit since the doctrine of employers is to evaluate the qualification and remuneration of individuals according to the work performed and not according to skills possessed. In this context the certification is taken into account only to the extent that collective bargaining agreements between labour and management so stipulate. Thus industry certifications are necessarily according to classifications in effect in the industry while references to other certifications (for example diplomas awarded by the Ministry of Education) vary according to collective bargaining agreements. Nevertheless this situation does not prevent the existence of a tacit functioning model that tends to make diploma levels correspond to classification levels.

Finally, it may be that new forms of work organisation and the changes in activity content will challenge the principle of remuneration founded on work actually performed by bringing in a factor of remuneration founded on the capacity to respond to unplanned events, even if this capacity is not mobilised during the review period.

4.1.6 *Conception considerations forming the basis for elaborating standards in your country*

The French system of initial vocational training is based on a concept of the general qualification of individuals. As such, it is part of what the Foundation's manual defines as an "occupational model". It should be remembered that the nature of this model has been reinforced by introducing in-company work training periods, the results of which are taken into account for awarding the diploma even when students do not prepare the diploma through an apprenticeship:

- the objectives are defined in terms of the occupational performances to be attained, but according to the knowledge required to attain them and as well the procedures related to the process for acquiring this knowledge (see point 5);
- the performances are expressed in terms of work activity, but also in terms of general knowledge. However, the field of personal qualities does not appear as such. It is defined by the expected

forms of behaviour in the occupational environment, for example being capable of relaying information, being capable of team work, etc;

- the standards mention both vocational skills and basic technical knowledge;
- they describe the activities that the individual must perform, but place these activities in the wider context of the function to which these activities contribute and to work teams in which they take place;
- the trend is to offer the widest possible skill profiles while respecting the specialisation reqired in the types of professional skill sought by industries or professions;
- several levels are defined, corresponding to the functions of clerical or manual workers, technicians or high level technicians are defined.

Adult vocational training has taken its inspiration also from other models. Generally, two situations can be distinguished:

1. involving low-skilled individuals whose vocational experience is non-existent or of little value as far as qualifications are concerned. Training programmes are based on a modular approach to building up knowledge, starting from the performance of simple tasks and moving on to progressively more complex ones;
2. involving those having vocational experience and who can benefit from skill validation programmes to the extent that this experience constitutes a genuine form of skill acquisition. The validation of acquired knowledge (*validation d'acquis professionnels*) can then exempt these individuals from both practical and theoretical tests regrouped in independent units, a situation in which there are no hierarchical relationships or prescribed test-taking order.

Finally, one can wonder what influence procedures for accrediting acquired knowledge as proposed in the European White Book will have, procedures that currently seem problematic in their application, particularly in professional fields.

Experts involved in developing standards. Procedures for the elaboration and implementation of occupational standards

Fig. 16: The step by step process involved in the creation of a diploma

Stages		Partners	Roles
I - ADVISABILITY DOSSIER	(1) Origin of request	Internal: Minister's office, Inspectorate, DLC External: Labour and management partners whether represented on CPCs or not	Formulation of request
	(2) Receipt of request	Directorate of Upper/ Lower Secondary Schools, Directorate of Teaching and Diplomas, Secretariat of CPCs, DESCs	First consideration and opening of dossier

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Stages		Partners	Roles
	(3) Preparation of "occupational advisability" dossier	Organisation making the request DESCO IGEN CEREQ	Preparation of the dossier (see Guide for preparing the occupational advisability dossier)
	(4) Consideration of dossier	DESCO IGEN	Expert analysis of dossier Submission of project to CPC
	(5) Proposal Decision	Members of CPC The Minister, on a proposal from the Directorate of Higher and Lower Secondary Education	Decides on commencement of work
II - TECHNICAL AND LEGISLATIVE PREPARATION OF DIPLOMA	(6) Appointment of project leader and formation of working group	General Secretariat of CPCs The project leader may be: ■ a member of the inspectorate, ■ a teacher; ■ an "employer" or "employee" representative ■ a member of the DESCO	Proposes a competent person to take over dossier Organisation of the working group (stages 7 to 10)
	(7) Reference system for occupational activities	Person in charge of CPC Offices of DESCO or person in charge of CPC Working group including ■ representatives of job sector ■ CEREQ, ■ Other experts	Ensure compliance with diploma policy and methodology and ensure coordination of meetings Ensure compliance with regulations Definition of functions and occupational tasks
	(8) Diploma reference system	Person in charge of CPC Working group (including Inspectorate and teachers)	Method, co-ordination regulations Definition of abilities and skills characteristic of diploma
III - DEFINITION OF TRAINING PROGRAMME CONTENTS AND RESOURCES	(9) Conditions of award of diploma	Person in charge of CPC DESCO Working group (including Inspectorate and teachers)	Preparation and implementation of general regulations Preparation of assessment content and form

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Stages		Partners	Roles
	(10) Opinion of CPC Decision	Project leader Members of CPC DESCO The Minister	Presentation of dossier Formulation of opinion Drafting of regulations Order creating the diploma
	(11) Training contents and Teaching recommenda-tions	DESCO General Inspectorate Teachers associated with work	
	(12) Equipment guide	DESCO General Inspectorate Teachers associated with work	
IV - DEVELOPMENT OF TRAINING	(13) Teacher training contents (initial and contents)	DESCO General Inspectorate Teachers	
	(14) Teacher training	ENNA MAFPEN Universities	
	(15) Planning and opening of sections	Regional and local authority level	
V - ASSESSMENT	(16) Pedagogical appraisal of contents	Inspectorate DPD and DESCO	
	(17) Follow-up of implementation of diplomas. Evaluation of creation of sections throughout the country. Evaluation by labour market.	Local education authorities Regional observatories Research organisations DPD CEREQ Research organisations	

ABBREVIATIONS:

I.G.E.N.: General Inspectorate of Education

DESCO: Directorate of Education and Schools

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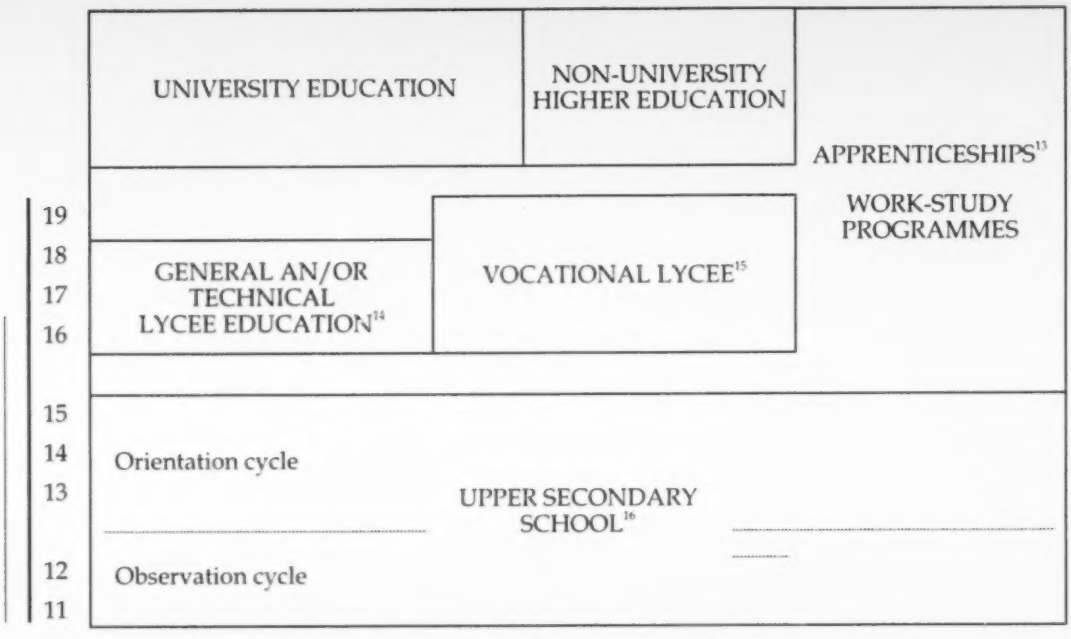
Compulsory Education



——— = Division within the level/type of teaching

..... = Beginning of alternative or end level/type of teaching

13 These courses are open to young people from 16 to 25 years old. Apprenticeships last two years. For work-study programmes, the qualification contracts last at least six months and no more than twenty-four months. The adaptation contracts last at least six months, and the orientation contracts last from three to six months.

14 General and/or technical lycées dispense higher secondary education that gives access to higher education or the working world. The students prepare a general baccalaureate which generally leads to higher education, a technical baccalaureate (B.Tn) leading to mainly to higher education or a technician diploma, which leads mainly to working. The schools preparing for grande école competitive examinations (CPGE) and higher technician sections (STS) in lycées dispense post baccalaureate training.

15 Two years of vocational lycée studies leads to the vocational aptitude certificate (CAP) or the vocational studies diploma (BEP); an additional two years of study leads to the vocational baccalaureate.

16 The upper secondary school dispenses general secondary education, which leads to a national diploma of the certification. The orientation cycle is concerned with general and technical education.

4.2 GERMANY: Hermann Schmidt

4.2.1 Definition of vocational education and training standards in Germany

Focus on in-company-training standards

Vocational education and training in Germany is organised in two different education systems

- an education and training system which is company and school-based ("dual system") covering most parts of the occupations in the private and a significant part of the public sector and serving two thirds of all school leavers on their way from school to work and
- a school-based vocational education system that either leads to an occupational qualification, equivalent to the dual system, or a broad basic vocational education within the limits of an occupational field, e.g. mechanical engineering. These full time vocational schools (one to three years) serve nearly 40 % of an age cohort to either improve their academic qualification before entering the dual system or prepare them for a job, e.g. in health services.

Vocational education and training standards are a public matter in both systems, although the term "standard" is not used in both spheres. In the Federal Republic of Germany education is strictly a matter of regional ("Länder") governments, while training standards are a national matter and thus subject to federal government decisions. The Federal Republic of Germany comprises 16 Länder. The education ministers of these regions set vocational education standards for their full time and part time (dual system) vocational schools. The standard setting and implementation process for full time vocational schools is similar to the procedures in other EU countries with school based vocational education systems. On the other hand the definition, setting, implementation and assessment procedure of national vocational education and training standards in the dual system for companies and schools is different from most other European training systems, even those co-operative or "dual" systems in Austria, Switzerland, Netherlands and Denmark.

Therefore, this paper will focus on vocational education and training standards in the so-called dual system of vocational education and training in Germany.

Legal definition of vocational education and training standards

Vocational education and training in the dual system has its legal basis in the Vocational Training Act (VTA) of 1969. "General Provisions" section one (1) of this act describes vocational training and the fields of training in which national standards are set:

> ***"For the purposes of this act the expression "vocational training" means initial training, further training and retraining."***

The description of the standard procedures in this paper will be restricted to the field of initial training because the process of setting national standards in further training and retraining is similar, although the concept, the objectives, the duration and organisation are different. Before defining the training standards the Vocational Training Act of 1969 defines initial training in section one (2).

> ***"The object of initial training shall be to provide, through a systematic training programme, a broadly conceived basic preparation for an occupation and the necessary technical abilities and knowledge to engage in a skilled form of occupational activities. Initial training shall also enable a trainee to acquire the necessary occupational experience."***

The legal definition of national vocational education and training standards in Germany is given in section 25 of the Vocational Training Act of 1969 using the term "training regulation":

(1) "As a basis for an orderly and uniform system of initial training and the adaptation of the system to technical, economic and social requirements and changes in the same, the Federal Minister of Economic Affairs or such other minister as may be responsible, acting in agreement with the Minister of Education and Science, may by ordinance, which shall not require the approval of the Federal Council (the second chamber: the author), officially recognise training occupations, cancel such recognition and issue training regulations for such occupations.

(2) The training regulations shall specify at least:

1. the name of the training occupation,
2. the period of training which shall normally not be more than three or less than two years,
3. the abilities (skills: the author) and knowledge to be imparted in the course of training (occupational characteristics),
4. an outline of the syllabus and timetable to be followed for the purpose of imparting the relevant abilities and knowledge (overall training plan),
5. the assessment standards."

In 1972 the federal government and the conference of the regional ("Länder") education ministers agreed that the curricula for part-time vocational schools in the dual system which have to be developed according to the national occupational standards set by federal government should be developed and revised synchronically with the federal training regulations.

Since 1976 the Federal Institute for Vocational Training publishes the "Register of Recognised Training Occupations" annually. When the Vocational Training Act had passed the Bundestag in 1969 some 600 training occupations existed. Within the last thirty years a significant change in the initial training policy has led to broad basic training standards as a result of which the number of recognised training occupations has been reduced by almost half. However, some thirty entirely new training occupations have been developed within the last four years, e.g. in the field of information and communication, which brings the actual total number up to 360.

4.2.2 *The functions of vocational education and training standards in Germany*

According to Germany's economic "free and social market" philosophy, standards for a mixed private-public education and training system cover the following aspects:

- a pedagogical aspect,
- a youth protection aspect,
- an education and training quality aspect,
- a system building aspect,
- a labour market mobility and permeability aspect.

The pedagogical aspect

There is a danger of in-company training being misused to obtain cheap labour. Therefore, there need to be clear pedagogical guidelines if training takes place in the technical and business setting of a company. That means that vocational education and training standards have primarily a pedagogic function, as well as all the provisions of their legal framework. From an education and training point of view, work is an effective teaching/learning method, but not every kind of work. For instance, simple activities like repetitive work at an assembly line have poor "learning" value, but simple activities, that can be planned, performed and controlled autonomously by the trainee have considerable learning potential.

Vocational education and training standards in Germany contain the following overall education and training objectives

- that the trainee should be able to plan, execute and monitor his/her occupational work activities in a self-reliant manner and
- that the trainee should be able to participate in continuing vocational training measures in order to maintain occupational competence and mobility.

Vocational education and training standards do not comprise methodological guidelines, because, like schools, companies are free to choose the training methods they prefer. But in the course of the last thirty years a wide array of supporting measures and aids have been developed to help companies cope with pedagogical problems while following the standards:

- there are special support programmes for the disabled and low achievers, financed by the Federal Employment Office,
- a pilot project programme in companies, financed jointly by federal government and companies, traces new developments to be considered for the revision of standards or for testing new training methods,
- numerous research projects are carried out for the same purpose,
- explanatory annotations to new standards, including guidelines for new teaching and learning media, are developed by tripartite expert groups and published by the Federal Institute for Vocational Training. There is also a large programme to train, retrain and test trainers, carried out by the chambers (e.g. Chambers of Industry and Commerce), especially to prepare trainers for the implementation of new or revised vocational education and training standards.

The youth protection aspect

Vocational education and training standards in Germany are embedded within a set of laws that serve the aim of youth protection i.e.

- Vocational Training Act of 1969
- Labour Promotion Act of 1969
- Employees' Representation Act of 1972
- Protection of Minors at Work Act of 1976.

These laws have set standards for youth protection, which have become part of standards in Germany, i.e.

- health care before and during the training period,
- contract protection after the probationary period (termination only because of an "important reason"),
- day release to attend vocational school,
- training contracts only for "recognised occupations" with national standards.

The education and training quality aspect

The most important quality aspect of standards in Germany is the combination of workplace and school based learning that meets the learning needs of a majority of students on completion of compulsory schooling. There are legal requirements to ensure the quality of the training process, i.e.:

- The suitability of the training company and its premises which have to be accredited by the chamber (there is compulsory membership!). The accreditation can be withdrawn. Chambers act on behalf of the government in the field of training.
- The personal and technical suitability of the training staff. The "technical suitability" must be proven by an assessment at the chamber, according to the "Training Instructor's Aptitude Ordinance" of 1972.
- General education (i.e. language and mathematics) and theoretical knowledge of the occupation to be provided by a part-time vocational school is compulsory.
- According to the "Employees' Representation Act" of 1972, works councils are entitled to control the quality of in-company training.
- Assessment requirements shall ensure a national minimum quality standard of training.
- The permanent involvement of two large research institutes and of a couple of hundred experts on behalf of employers and trade unions is necessary to ensure the up-to-date state and quality of vocational education and training standards.

The system building aspect

Vocational education and training standards in Germany serve as an innovative power within a public education system that is partly run by the private sector. Therefore, the development, the implementation and the assessment of standards is looked upon as a joint venture of employers, trade unions, federal government, state governments, the chambers and vocational training research. The innovative role of vocational education together with the pressures of economic, technical and social changes have significantly affected the development of standards within the last thirty years, and especially the time framework. Development and revision have become permanent processes. The time frame for standard development or revision has been reduced from an average two years to less than one year.

Some 600,000 training companies and some 1,500 occupational (vocational) schools/colleges have to cope with the challenges of permanent change in the scope of training, its objectives, contents and methods. The government is keen to have the earliest trend data to hand (research) and to involve the stakeholders (employers/unions) at a very early stage. Thus, vocational education and training standards have become the starting point for wider discussions about the system as a whole, its shortcomings and its achievements, and the necessity for improvement.

The labour market mobility and permeability aspect

Vocational education and training standards in the dual system fulfil different functions with regard to the mobility of its graduates in the labour market and the permeability (access) to further and higher education:

1. ***Labour market mobility***

   The standardisation of training in Germany has resulted in a skilled worker qualification ("Facharbeiterbrief") issued by a chamber on behalf of the government. This qualification has gained widespread acceptance with employers throughout the country. Some 40% of all graduates leave their training company after completing their training. They hold three certificates:

   - the chamber certificate, which corresponds to the national standard;
   - a vocational school certificate, which lists vocational and general (i.e. language) subjects and marks;
   - a company certificate which focuses on the development of the trainee's personality, achievements as a team member etc.

   These certificates help graduates to cut the time by two thirds when looking for a new job compared with other unemployed people.

2. ***Access to further and higher education***

   The standardised skilled worker qualification, beyond its function in the job market, has become an important link to further and higher education as well as to an academic career:

   - dropouts from the school system who have managed to get a training contract (some 40,000 to 50,000 do so every year) and have graduated from the dual system are recognised as having the equivalent of the general school leaving certificate;
   - holders of an intermediate school certificate (10 years) who have graduated from the dual system are entitled to attend a tertiary vocational school ("Fachschule") which leads to a "technician" qualification;
   - a certificate from an intermediate school plus the skilled worker qualification entitles the person to attend an upper secondary vocational school ("Fachoberschule") for one year and subsequently to attend a college of vocational higher education ("Fachhochschule").
   - one third of A-level students ("Abiturienten") go through the dual system (mainly in commercial occupations). They benefit from a one-year reduction of the training period prior to their studies at universities. This double qualification is in great demand in the labour market.

4.2.3 *Scope and observance of vocational education and training standards*

The Vocational Training Act of 1969 made in-company-training part of the public education system. Training is, of course, not compulsory. Companies are free not to train, and the majority of German companies do not train. It is estimated that 40% would not get permission to train because they could not provide a three-year training programme. Half of those, which are entitled to train, do offer training places. These companies must follow the provisions in the respective laws and national training regulations laid down by federal government.

- All sectors of the economy take part in training within the dual system: industry and commerce, the crafts' sector, the public services, health care, the liberal professions (i.e. doctor's assistants) and agriculture.
- Schooling is a matter of state ("Länder") legislation. After compulsory education, all school leavers must attend vocational schools until they are eighteen. Those who are trained in the dual system have to attend part-time vocational schools up to the time of the assessment.

4.2.4 *Conceptual considerations concerning the process of standard setting*

If vocational education and training standards are to play their proper role, they must respond to the competency needs of the economy. Since it is impossible to foresee future labour market needs, it is necessary to develop a scenario of future developments in the field of human resources and let the most important stakeholders arrive at a shared view. The best way to reach such an agreement is through the participation of all stakeholders from the very beginning. That is the concept of standard setting in Germany.

The Vocational Training Act of 1969 institutionalised vocational training research for the first time in the Federal Institute for Vocational Training Employers, trade unions, the federal government and – later on – all regional governments became members of the institute's board, enjoying equal decision-making powers. The federal government invited employers and trade unions to co-determine – with 50% of the vote – the scope and focus of vocational training research as well as the planning procedure and the decisions in the standard setting process ("principle of consensus"). A standardised procedure describing the roles and functions of each stakeholder in detail was developed in the seventies and finally adopted by the Board of the Federal Institute.

The Vocational Training Act of 1969 had set out the concept of education and training in the field of initial training as follows:

- standards have to be broad, basic occupational standards ("Berufsprinzip"), with a well defined curriculum, not less than two years.

Standards for further training, e.g. the upgrading from skilled worker to foreman ("Meister"), on the other hand are designed as an output assessment after a couple of years of work experience and a set of modules or theoretical courses.

This policy has retained the support of all stakeholders over the last three decades. Even in the course of numerous reforms of the dual system during the last years, all stakeholders have maintained the "occupational standard" as the only acceptable type of standard for initial training.

The continuous process of broadening the formerly often narrow occupational standards has reduced the number of training regulations and has generalised objectives and contents of the curricula by means of a flexible combination of skills:

- ***Occupational skills and knowledge*** - job related skills, work activities, functions and roles,
- ***Key skills*** - overarching capabilities like analytical and communication skills, team work capacity, systems knowledge etc.
- ***Employability skills*** - foreign languages, customer orientation, computer literacy, readiness for work etc.

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Because of these changes, a fair amount of the specific skills and knowledge that were formerly part of initial training have become part of further training and specialisation. Initial and further training are looked upon more and more as two parts of one occupational *career*, but probably not in the same *occupation*.

Some trades, together with the Federal Institute, have begun to develop "small enterprise careers", e.g. car-mechanic, service technician, master mechanic ("Meister"). Standards of that kind are at different levels and relate to each other.

4.2.5 *The stakeholders of vocational education and training standards setting*

These stakeholders come from the private and public sectors and from vocational training research.

Private sector:

- All *employer* associations have joined and formed one organisation (1972) to represent them in the national vocational training planning process - Kuratorium der Deutschen Wirtschaft für Berufsbildung, Bonn;
- The *trade unions* under the umbrella organisation Deutscher Gewerkschaftsbund (DGB), Düsseldorf and the Deutsche Angestelltengewerkschaft (DAG), Hamburg speak on behalf of the German workforce on vocational training matters.

Public sector:

- The *Federal government* has the sole responsibility for setting standards because they are considered a national matter. The Federal Minister for Education and Research carries the overall responsibility for federal vocational training policy, but the power to set vocational training standards rests with the so-called "responsible" minister. For more than 90 % of all recognised training occupations the responsible minister is the Minister of Economic Affairs.
- The *regional ("Länder") governments*, acting through the conference of the education ministers of the *Länder* (KMK) develop school curricula according to the standards that have been set by federal government.

Research bodies:

- The Federal Institute for Vocational Training (Bundesinstitut für Berufsbildung, BIBB) in Bonn and the Institute for Labour Market and Occupational Research (IAB) in Nürnberg, both with tripartite governing boards, cater for research and development and serve as frameworks for the stakeholders to meet.

  Besides these two institutes there are numerous private and public institutions dealing with vocational training research and development, many of them being members of the research-network, established by Bundesinstitut für Berufsbildung and the Institute for Labour Market and Occupational Research.

4.2.6 Vocational education and training standard development

Pre-requisites of professional tripartite standard setting

The legislation of 1969 and the following years embedded standards into a set of legal provisions, the most important of which was the Vocational Training Act and its training regulations. The same law established the Federal Institute for Vocational Training whose tasks have already been described. Using all the legal provisions, including the descriptions of stakeholder roles, a procedure has been established for the development and implementation of standards.

It took eight years to create all the pre-conditions and pre-requisites for the functioning of a scientifically based tripartite standard setting process. The procedure was described in detail and adopted by the board of the BIBB in 1978. It has been successfully applied in more than four hundred cases of standard setting or revisions, none of which has been rejected by training companies.

The most important problems which had to be solved during this process were the following:

Stakeholder professionalisation

Employer and union representatives have to learn to describe their training needs and standards. The standard of a large business does not fit small and medium-sized enterprises. A best practice standard cannot be made a national standard, because there are not enough training companies capable of meeting all the requirements. It needs some experience to define a national minimum standard that can be met by an average training company and reached by an average learner.

Public - private partnership in vocational training planning

One of the most important pre-requisites for successful standard setting is mutual trust between the stakeholders. A critical factor for achieving trusting co-operation is a political consensus on the vocational training system, the principles of standards and a clearly defined framework of responsibilities of the stakeholders within the process. Unless the government is willing to transfer part of its political power to the private sector for co-determination of vocational education and training standards and the training process itself, employers and unions will not get really involved and take responsibility. It takes time to reach that point of trust and co-operation.

Common set of data and a public debate

The above mentioned research institutes began to collect standardised training data in the mid-seventies. Since 1977 the Federal Minister for Education and Research presents annually a "Report on Vocational Education and Training" to the cabinet and parliament and thus starts a debate on the state of training in Germany. The report is prepared by the Federal Institute for Vocational Training and discussed on its board with the stakeholders. The report then becomes *the* planning document for all partners.

Vocational training research in the context of economic and educational tension

Vocational training research that dealt with learning and training processes at the workplace in companies had no history in Germany before 1969. This kind of research required the development of networks and methods as well as the acceptance of practitioners. The difference between the business views of companies and the educational views of schools inevitably leads to a state of permanent tension even in co-operative or dual systems. Research can act as a catalyst in bridging these differences.

The procedure of vocational education and training standard development

The initiative

The initiative to update or develop a new standard can be taken by anybody in the country who thinks that there is a need to do so. The Federal Minister for Education and Research has to be addressed and decides, together with the responsible minister for that particular occupation (e.g. regularly the minister for economic affairs), whether this initiative should be followed on or not. As a rule the education minister asks the BIBB whether the criteria for the recognition of a new training occupation are fulfilled. These criteria were set up in 1974 by the tripartite Federal Committee for Vocational Training:

- labour market aspect:
  - a national, long term labour market demand,
  - a need for initial training in a broadly based occupational framework,
- educational aspect:
  - the training and education plan must cover a broad basic occupational training and avoid narrow specialisation, the scope of skills of this training occupation must allow the acquisition of the ability to reason and act independently when applying skills and knowledge,
  - the training must enable the young person subsequently to take part in continuing training,
  - the training objectives must be attainable for average learners and training companies,
- system building aspect:
  - the duration of training must last from two to three years,
  - short term training and single modules cannot earn recognition,
  - recognised training occupations must be sufficiently self-contained.

The BIBB checks these pre-requisites and submits a proposal. The ministries decide after having heard the employers and the unions. Each of the social partners can de facto veto a new standard (recognised training occupation). Therefore, most of the initiatives are taken jointly by employers and trade unions.

If the federal government follows the recommendation, the decision to start the revision or the development of a vocational education and training standard is taken jointly by the responsible ministers. The BIBB is asked to start the procedure that has been adopted by its tripartite board in 1978. This procedure is characterised by four clearly defined phases which can be applied if necessary:

1. *Research or study phase:* if there is a lack of sufficient data to answer the questions that arise in the discussion of the 1974 criteria the BIBB or the Institute for Labour Market and Occupational Research or other research institutes clear these facts;
2. *Occupational characteristics development phase:* during this phase the following parameters for the standard are decided on jointly by the social partners and federal government, assisted by the BIBB:
   - The name of the occupation,
   - The duration of training,

- The occupational field, to which the occupation shall belong or if it does not belong to an occupational field because it belongs to many categories, e.g. information technology occupations,
- Structure: i.e. a "monostructured" occupation or an occupation with diverse qualification profiles,
- A catalogue of characteristic skills or abilities.

Representatives of the education ministers of the *Länder* take part in this phase.

3. *Curriculum development and co-ordination phase:* this is the experts phase. The BIBB asks employers and trade unions to nominate their experts who usually come from training companies. The education ministers of the *Länder* are invited to send their school curriculum experts. The BIBB provides standard specialists who are responsible for the project. Representatives of the responsible federal ministries frequently take part in the meetings. Several drafts are prepared and presented for discussion. Employers, chambers and unions try to reach a broad agreement for the new standards by consulting their members and presenting comments and suggestions. Finally, the BIBB submits a draft, which the social partners have agreed on, to the responsible federal ministries. The school experts submit their draft of a vocational school curriculum to the conference of the education ministries of the *Länder* for approval.
4. *Issuing and publication phase:* Federal and *Länder* governments approve the new standard and publish it jointly in the Federal Gazette (Bundesanzeiger).

The objectives of standard development are determined by the principles of the Vocational Training Law (i.e. broad basic training), the 1974 criteria for recognised training occupations and the relevant skills, abilities and knowledge of the occupation. The company curriculum, which is part of the standard, comprises the duration and recommendations for the training of performance based work activities or functions of skilled workers in the work process. It also defines the role that an individual skilled worker has to play in the work process or in a team ("independent planning, execution and control of a work activity"). School curricula contain basic technical and or commercial/business knowledge that must be applied on the tasks or functions carried out at the workplace. Specialisation is left to continuing and further training which usually begins much sooner than it used to, after the completion of initial training.

Innovations and time frames in vocational education and training standard setting

Each of the above mentioned phases is to be shortened or prolonged on the basis of an agreement between the social partners, the availability of data, the demand pressure of the labour market etc. In a more stable economic environment, the revision of existing occupations is far more common than the development of new standards. This also applies for the time that stakeholders have available to draft a new standard.

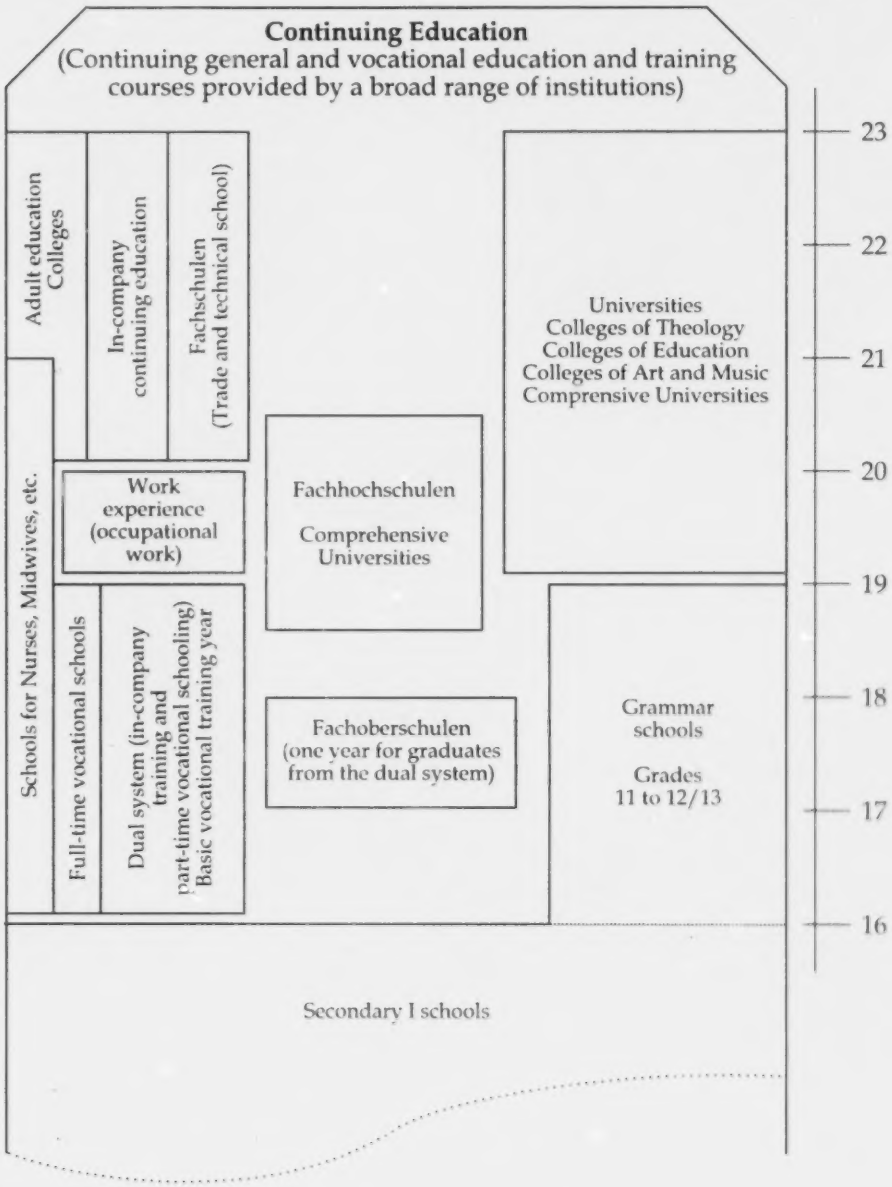
Some twelve new standards were developed between 1970 and 1995, one for the plastic industry (1977), one for ecological matters (1984), four in the occupational field of electrical/electronic engineering (1986) and six for mechanical engineering (1986).

The development period of these standards lasted two to three years on average, too long from the point of view of critics in companies and in politics. On the other hand critics admitted that these new developments and a couple of hundred revisions that took place within these two and a half decades were accepted by training companies and vocational schools without major protest because

of the close co-operation between practitioners and research personnel and the intensive consultation with the frontline of training and education.

The rapid changes that took place in the economy since the late eighties and especially in the early nineties, mainly in information and communication technology (ICT), multimedia, microtechnology and service industries led to a revolutionary reform process in standard development. Since 1995 some 30 new standards have been developed in the above mentioned industries. Most of these new standards were developed within less than one year, among them four standards for ICT and three for multimedia.

Fig. 17: The simplified basic structure of education system in Germany



4.3 NETHERLANDS: Ties Pauwels & Anneke Westerhuis

4.3.1 The national classification system of vocational standards in operation in the Netherlands

The Dutch qualification structure for vocational training since 1996

Many efforts and changes to the reform of the vocational education and training system in the Netherlands have been undertaken.

As of 1 January 1996 the Wet Educatie Beroepsonderwijs (WEB) (Education and Vocational Education and Training Act) came into effect in the Netherlands. This Act was necessary in order to establish good links between the various forms of education and to improve the relationship between the demands from the labour market and the supply from the educational sector. In order to achieve this, a consistent and transparent structure of qualifications was introduced in secondary education and training.

The qualification structure now formulates precisely what education should achieve; the educational institutions themselves determine how they achieve these objectives. The institutions providing education and vocational training must provide their students, be they young people without work experience, or those already in work, those looking for work, adults, immigrants or the handicapped, with made-to-measure educational solutions.

The national bodies dealing with vocational education are responsible for ensuring that attainment targets are developed. *Attainment targets are descriptions of the minimum knowledge, understanding, skills and attitudes necessary to obtain a qualification.* Development of attainment targets is a major challenge, since these targets determine the types of skilled men and women required, at whatever level, in the labour market.

National bodies must therefore draw up these attainment targets in close consultation with business and industry. At the end of this process, the targets are laid down by the Minister of Education.

The hallmark of the Dutch qualification structure is that the social partners (the central employers' and employees' organisations) are required to legitimise the vocational profiles.

A vocational profile is a description of the most important and indeed most common activity in a specific vocation.

On the basis of the legitimised vocational profiles, the national bodies develop the attainment targets, and hence also the qualifications. The advantage of this structure is that it directly involves both employees and employers, in developing the qualification structure.

4.3.2 *The classification system of levels within secondary vocational training*

The Netherlands recently switched to a new classification system of levels *within secondary vocational training*. In this classification, called national qualification structure, the final level of attainment of vocational training is classified. The organisation of the training which leads to this final level of attainment is not laid down. Each school is free, within certain margins, to organise the training in any way it sees fit. The Dutch qualification structure contains four levels.

In developing the current Dutch format for the national qualification structure, much work has been done by a working group in which CIBB (now CINOP), some national bodies and COLO took part.

Activities of the Dutch working group on 'Classification Levels'

In developing the current ***format for the national qualification structure***, i.e. the classification and definitions as used in the Dutch qualification structure, use has been made of SEDOC descriptions and four other relevant systems (ASF, NVQ, CBS and OC&W). The definitions and the design of the qualification structure have been developed by a working group in which CIBB (now CINOP) and COLO also took part. The working group adopted the following procedure in developing the qualification structure:

STEP 1 **Studying other (national and international) classification systems**
(initially five criteria: independence, responsibility, complexity, theoretical and practical level, transfer)

STEP 2 **Selecting classification criteria**
(Three of the original five were selected: responsibility, complexity, transfer)

STEP 3 **Drawing up definitions of classification criteria**
In the definitions the term *degree* indicates that the question of scale is involved. The term *actions* has been chosen, as this can be translated into occupational practice (activities) and education (skills):

responsibility: the degree to which occupational actions have consequences for the execution of occupational actions by others;

complexity: the degree to which occupational actions are based on standard procedures;

transfer: the degree to which occupational actions can be applied in other occupational situations.

STEP 4 **Drawing up a scale to measure each classification criterion**

STEP 5 **Describing the levels of the qualification structure**

Level 1 (assistant): The worker is responsible for the execution of his/her own work. The work consists primarily of the application of automated routines and only to a limited extent of the application of standard procedures. It involves job-related skills and knowledge.

Level 2 (occupational practitioner): The worker is responsible for the execution of his/her own work. In addition there is a collective, co-operative responsibility in the work whereby co-operation with colleagues takes place. The work consists of applying automated routines and standard procedures. It involves occupation-related skills and knowledge.

Level 3 (specialised practitioner): The worker is responsible for the execution of his/her own work and must also account for his actions towards colleagues (non-hierarchical). In

addition he/she bears explicit and hierarchical responsibility: he/she monitors and supervises in the application of automated routines and standard procedures. His/she work comprises the application of standard procedures and their combining. In addition he/she combines or devises procedures, in the light of work preparation and supervisory activities. It involves for the most part occupational skills and knowledge.

Level 4 (middle management practitioner): The worker is responsible for the execution of his/her own work and must also account for his/her actions towards colleagues (non-hierarchical). In addition he/she bears explicit hierarchical responsibility; which concerns planning and/or administration and/or management and/or development of the whole production cycle. Furthermore he/she combines or devises new procedures. It involves specialist skills and knowledge and/or occupation-independent skills and knowledge.

Level 5 (added for the sake of completeness, this level is not a component of the qualification structure though training in higher vocational training is at this level): The occupational practitioner is responsible for the execution of his/her own work and must account for his/her own actions (towards colleagues) (non-hierarchical). This work can involve both the application and combining/devising of a limited number of complex standard procedures (specialisms). The work may also include the application, combining and devising of standard procedures for a range of activities (breadth). In addition the occupational practitioner bears explicit hierarchical responsibility; it does not involve responsibility in the executive sense such as is the case with monitoring and supervisory activities, but rather responsibility in a formal, organisational sense. It involves specialised, occupation-independent skills and knowledge. The emphasis is on devising new procedures, tactical and strategic actions and skills with regard to development and execution of policy.

The standard in the Netherlands, expressed in a possible format

In format used in the Netherlands and in the explanation from the Ministry of Education, Culture and Science, it is stated that a classification into levels should provide insight into the various **levels of occupational practice**.

The classification must be derived from **occupational requirements** and not from the (given) training structure. Furthermore, this Ministry also proposes that a link to the SEDOC classification of five levels should be sought. The SEDOC classification and the description of the SEDOC levels are however derived from differentiation in levels of training. It is a **training-orientated classification**, not aimed at levels of occupational practice. It is implicitly assumed that a certain hierarchy in levels of vocational training represents a corresponding hierarchy in occupational practice. This ambiguity in the format is reflected in the way in which the various national bodies of vocational education have dealt with it. On the one hand the aspects of responsibility, complexity and transfer are designated as **'characteristics of the occupational situation'**, while in working these out in the qualification structure, often a more educational theoretical approach is chosen, particularly with regard to complexity. For example, the remark *'that classifying a level can only be done properly when documents on final levels of attainment are available as a source of information* illustrates that level classification is obviously more readily related to educational final levels of attainment than with the occupational situation.

The elements of standards

In fact there were three elements which were used in defining the standards, i.e.:

Responsibility

1. **individual job responsibility,** which is linked to the execution of tasks, at any level.
2. **non-hierarchical responsibility,** which is linked to mutual responsibility at the same level.
3. **hierarchical responsibility,** which is linked to monitoring/supervisory/management tasks, whereby levels differ operationally.

Complexity

1. **automated routines,** which are linked to automatically executed algorithms.
2. **application of standard procedures,** which is linked to non-automatic application of algorithms.
3. **combining standard procedures,** which is linked to skills in solving problems with existing procedures.
4. **developing new procedures,** which is linked to skills in solving problems in new ways and possibly adding new aspects to the content of an occupation.

Transfer

1. **job-related skills,** which are skills linked to a part of the production cycle.
2. **occupation-related skills,** which are skills linked to production techniques.
3. **occupation-independent skills,** which are skills applicable in several occupations/jobs.

Types of standards which are used

The National Advisory Committee on Vocational Education and the Labour Market (Advies Commissie Onderwijs Arbeidsmarkt - ACOA) is responsible for ensuring that the qualification structures of all branches of industry are drawn up in accordance with the format. In 1997 the ACOA published its findings in a discussion memorandum: *"The development of the qualification structure for secondary vocational education: The situation to date"*.

We will describe ACOA's principal conclusions.

The ACOA commented that the qualification structures of the branches showed differences. Some qualification structures are more like **training structures**. There are two approaches here: in one branch the idea is primarily in terms of an occupational qualification, and in the other in terms of training (government-funded). This duality is expressed in three different ways:

- differences in the classification principles adopted to divide qualifications into partial qualifications.
- the degree to which the structure of qualifications is detailed independently from the learning process.
- the emphasis which the traditional funded training programmes in the initial vocational education receive in the qualification structure (NB. qualifications can also be included in the qualification structure for training programmes which do not belong to the initial (i.e. government-funded) training programmes).

Occupational classification used in the qualification structure

Although the inclusion of an occupational classification is not obligatory, such classifications are to be found here and there. The quality of the occupational classification which the various national vocational education bodies use is often fairly poor. In most cases one is referred to an occupational analysis report for occupational classification. Apparently the national vocational education bodies believe the justifying function of the qualification structure is of greater importance than the communicative function.

Most of the national vocational education bodies adopt fairly formal arguments for justifying the levels which qualifications are given. A characteristic of this formal approach is the (practically identical) adoption of the general description of levels from the format qualification structure. In the case of a branch-specific approach, the argument is derived from a general picture of occupational practice and the occupational practitioner within this. Through this the occupation which one wishes to qualify for is substantiated in such a classification.

Old and new training programmes available

A further glance at the new qualification structure makes clear that there is *practically a linear connection between the presumed training level of the old training programmes* on offer and the designated level of the (new) qualifications. In other words: the old primary, secondary and tertiary apprenticeship training programmes are placed in qualification level 2, 3 and 4 respectively. The tertiary training programmes are primarily classified as specialist training (level 4). The old 4-year MBO courses are nearly all connected with a qualification at level 4. This means that in the development of the qualification structure, the conversion from "old" to "new" training programmes available has been the dominant factor. This has been a case of conversion rather than a reorganisation of training programmes across the four levels.

Occupation-orientated final levels of attainment

The manner in which national vocational education bodies have put the qualification structure into practice in terms of final levels of attainment does vary. The final levels of attainment (the eventual knowledge, skills and attitudes obtained) must be shown in the qualification structure. These types of final levels of attainment can also be used in recognising qualifications obtained elsewhere, through experience for example, something which is desirable according to the qualification structure format. This manner of implementation implies that so-called "conditional objectives" or a subject structure do not belong in the qualification structure. Some national bodies have done this however. This shows that they think primarily in terms of training courses and much less in terms of qualifications.

Avoidance of bias

The ambiguity in the format has been reflected in the way in which the various national bodies have dealt with it. On the one hand the aspects of responsibility, complexity and transfer are designated as **'characteristics of the occupational situation'**, while in working these out in the qualification structure, often a more educational theoretical approach is chosen, particularly with regard to complexity.

For example, the remark *'that classifying a level can only be done properly when documents on final levels of attainment are available as a source of information"* illustrates that classification into levels is obviously more readily related to final levels of educational attainment than with the occupational situation.

The "rules of the game" of classifying levels do not appear to be clear either. Scoring on the basis of the three criteria generates confusion. It is not always realised that a high degree of complexity, for example, also assumes the existence of lower grades of complexity. That explains the confusion that arises when a qualification scores in several grades of complexity (or responsibility or transfer) and therefore 'cannot be classified properly in a level'.

We also find that the terminology does not link up with that of the users of the format. The users are not used to characterising aspects of the occupational situation with terms such as 'automated routines or standard procedures'. The users talk about the jobs that somebody carries out and the context of the work, something which is missing from the classification of the level. It is this context in particular, the situation in which someone is working, which determines the complexity (often interpreted as a synonym for 'level') of an occupation, the users believe.

The application of this model leads to targeted discussions on the core of occupational practices and designation of the level (concerning the interpretation of the distinguishing terms, which because of their limited recognisability by workers were less suitable to use).

4.3.3 The definition of the classification system

Description of the classification system

In the new educational model, participants leave school after reaching a certain qualification level. If they have completed the programme successfully, they are awarded a diploma.

This does not mean, however, that dropouts are left empty-handed. A specific qualification level is made up of partial qualifications, and for each of these the participant receives a certificate.

The '*starting qualification*', i.e. the minimum qualification that every person should have reached, is situated at the second level of the qualification structure (skilled worker).

The point at this level is to acquire those skills needed to perform somewhat complicated routines and standard procedures. The responsibility is limited to the specific job description.

The first level (assistant) is a new element in the qualification structure. It was created to allow participants who are unable to acquire a starting qualification to enter the labour market with a diploma. Trade and industry need qualified employees at this level. Compared with the skilled worker, the assistant will perform less complicated work which will generally not require him or her to act or think as quickly.

At level three (professional), school-leavers are capable of going beyond their own job description. The professional is accountable to his or her colleagues and monitors and supervises how others carry out standard procedures. The professional will also be able to come up with procedures related to production planning and control.

The fourth level (middle manager or specialist) requires non-specific skills, such as the ability to act tactically and strategically. The middle manager or specialist will have an explicit responsibility within the hierarchy, not in the operational sense (such as monitoring and supervision), but more in the formal, organisational sense. Another part of his or her task is to come up with new procedures.

Educational pathways

The programmes within this qualification structure may consist of two different educational pathways:

- a vocational training pathway, in which the percentage of vocational practice training is between 20 and 60%;
- an apprenticeship training pathway, in which the percentage of vocational practice training exceeds 60%.

The vocational training pathway is very similar to the present senior secondary vocational education, while the apprenticeship training pathway is comparable to the apprenticeship system. The difference between the two pathways is in keeping with the main policy goal: to bring education and the labour market more in tune with one another.

At this moment, there is only one classification system for vocational education. However, like vocational education, adult education is to have its own qualification structure.

Unlike vocational education, adult education is not concerned with qualifying participants for a particular occupation.

The goal is to provide a solid link to vocational and secondary education. Equally important is that the participants learn how to function well in society (self-reliance). After 1 January 1997, there were four different types of programme:

- Secondary general adult education *(vavo, mavo, havo, vwo)*
- Programmes focusing on general personal and social skills
- Dutch as a second language (nt2)
- Programmes focusing on self-reliance

(See annex 1 – Scheme of the qualification structure for adult education)

Procedures for the development of standards

The Dutch ***format for the national qualification structure*** is based on SEDOC descriptions and four other relevant systems (ASF, NVQ, CBS and OC&W). The definitions and the design of the qualification structure have been developed by a working group in which CIBB (now CINOP) and COLO also took part.

The procedure agreed and the institutions / people involved

As from August 1997, all vocational training programmes must result in final levels of attainment which are ordered in the manner stated in the format. All branches in secondary vocation education were required to develop a qualification structure, making use of the above-mentioned criteria and with final levels of attainment in the training at each of the four levels. Obviously, several qualifications ('vocational training') can be distinguished at each qualification level. Each branch of industry possesses a national organisation which has undertaken this exercise.

There are several parties active in the field of vocational education that jointly determine, monitor and guarantee the quality of education.

Six of these parties are important actors in the field of vocational and adult education.

In drawing up the qualification structure for their branches, the National Bodies called upon people from industry, both from branch and umbrella organisations as well as from the Committees for Education and Industry (Commissies Onderwijs Bedrijfsleven - COB).

The risk, however, of involving a COB is that these committees often examine the material from an educational point of view. This can cause a certain degree of bias. The role of social partners and businesses is important in establishing the level of a qualification. Representatives from schools are sometimes also invited to contribute their ideas.

The **actors** in the field of vocational and adult education are:

The educational institutions providing educational programmes

The educational institutions in the field of vocational and adult education are the ROCs and AOCs. The task of the ROCs is to offer the entire range of programmes in vocational and adult education: non-formal education for young people, basic adult education, secondary general adult education, apprenticeship training and senior secondary vocational education, in at least three educational sectors. In most cases the educational institutions will carry out their tasks at different local levels. The AOCs or agricultural training centres also provide education at the pre-vocational and senior secondary vocational level.

The LOB's responsible for vocational practice training

The LOBs are joint national vocational education bodies set up by an industry, a group of industries or an occupational category. In addition to some 20 LOBs which reside under the authority of the Ministry of Education, Culture and Science, there is one LOB in the agricultural sector which is the responsibility of the Ministry of Agriculture, Nature Management and Fisheries. The LOBs are responsible for vocational practice training. The board of an LOB consists of the representatives of employers, employees and educational institutions. Every LOB has a Committee on Education and Trade and Industry (COB). The LOBs have the following tasks:

- to formulate exit qualifications within the framework of the qualification structure for vocational education. The qualification structure describes the goals of education. The exit qualifications indicate what pupils at the various qualification levels should be able to do in actual practice;
- to ensure that there are a sufficient number of trainee posts available in trade and industry;
- to select the trainee posts for vocational training programmes and to encourage the quality of these posts.

The tasks of the COBs include proposing exit qualifications for each vocational training programme and categorising these exit qualifications into partial qualifications within the framework of the qualification structure.

Local government is responsible for adult education

Local government is responsible for the actual implementation of the WEB when it comes to adult education. The Ministry of Education, Culture and Science takes a background role. In its role as administrator, the local government receives a budget for adult education in the form of a specific grant. An ROC is responsible for providing adult education programmes. The local authorities sign a contract with such educational institutions which set out the programmes to be implemented, the number of participants, the specific target groups, the period of time and the amount of money to be made available.

Trade and industry which bridge the gap between education and the labour market

The programmes must be well in tune with the needs of the labour market. Trade and industry exercise an influence on the contents of the programmes through the qualification structure. That is why businesses are represented on the boards of the LOBs. Trade and industry further contribute to vocational training by creating trainee posts for vocational practice training and by participating on ROC boards.

Ministries (Ministry of Education, Culture and Science; Ministry of Agriculture, Nature Management and Fisheries) **are responsible for the quality, accessibility and funding**

They determine the exit qualifications for the various programmes, the state's contribution to ROCs and AOCs for vocational programmes, and the state's contribution to local government for adult education.

Initiatives to update standards

The WEB creates a self-regulating system in which the various actors in the field of education are in balance with one another. One important element of that system is the performance-based funding scheme, which will only come into effect in the year 2000.

Another important innovation is the development of a system of quality assurance. The educational institutions are taking the first step: they are already working on quality improvement and report on their progress every other year in a quality assurance report. This report is a public account of the way they have attempted to provide the desired level of quality. They must also describe what they have done with the results of previous quality inspections and which improvements they have undertaken or plan to undertake.

Another element of quality assurance is the new method of guaranteeing quality 'externally': the external verification of assessments. Once a participant has acquired 51% of the necessary partial qualifications (the smallest possible margin) required to reach a full diploma, his or her assessments will be set by or under the auspices of an agency outside the educational institution. This 'examining institute' must not be associated with the institution which provides the teaching. They must also be able to demonstrate their own level of quality with the assistance of independent experts. The examining institutes are to be listed in the Central Register of Vocational Training Courses (CREBO).

Sanctions and supervision

Should it happen that an educational institution does not meet the relevant quality criteria, it must take action on its own initiative. If an institution is repeatedly shown to fall short of the criteria, it will receive an official warning from the two Ministries mentioned above. If there is no indication of improvement, the institution may lose its right to receive funding and will no longer be considered qualified to award recognised diplomas.

General supervision is the responsibility of the Education and Agricultural Education Inspectorates. As in higher education, the work of these inspectorates is restricted to general monitoring of the way in which educational institutions undertake quality assurance. Should it have reason to do so, the inspectorate may have a committee of external experts carry out an investigation for a second opinion.

A large number of different parties must ensure that the objectives set out in the WEB are in fact attained. While the state continues to be responsible for providing a clear framework for adult and vocational education and the way it is funded, it is also the intention that those implementing the policy are given all the room for manoeuvre that they need. It is up to them to produce large numbers of school-leavers with acceptable qualifications.

To begin with, this approach requires the parties involved to coordinate their tasks and responsibilities closely. In vocational education that means primarily, coordination between the educational institutions and the LOBs.

In adult education, it is the local authorities that play the central role. The state will restrict itself mainly to providing funding, in addition to monitoring the conditions, for example regarding quality assurance and the educational contract. In that context, there will be more consideration given to performance than has been the case.

In future, funding for vocational education will be based on the number of participants and their performance in the form of diplomas. Those groups of educational institutions that have a low intake level will receive a special increase in funding. The purpose of this system is to increase the success rate and to prevent dropouts. Educational institutions will be encouraged to guide participants towards a final diploma as efficiently and effectively as possible. The new funding model will come into force on 1 January 2000. Until then, vocational education will receive a stabilised budget.

The use of fixed and formal periods of validity of standards

One of the parts of the vocational qualification system whose period of validity is laid down formally (in the WEB) is the occupational profile. The age of these profiles, legitimated by social partners, may not exceed five years.

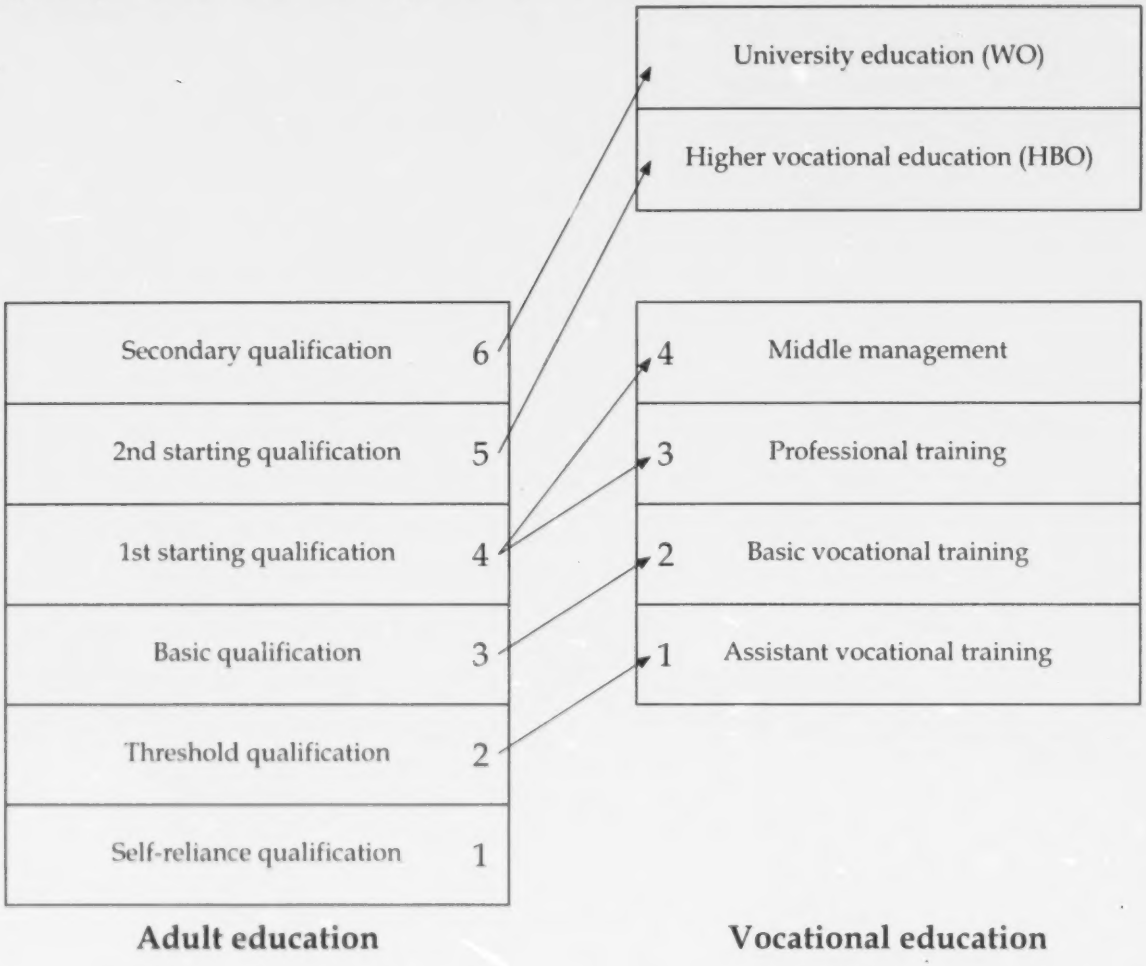
In this way, the classification of occupation has been chosen as the starting point, with the occupational profile as the basis. The three scores (on Responsibility, Complexity and Transfer) were the determining factor in classifying the levels.

In fact the five year period was decided on by the (independent) Advisory Commission Education Labour market (ACOA) which was established by the Ministry of Education.

Other tasks of this Commission are:

- reviewing the efficiency of vocational education
- judgement, presentation, establishment and changing the final levels of attainment.

Annex 1
Qualification structure for adult education



The schemes pertaining to the first type of programme (*vavo*), in which the participants may obtain a full or partial *mavo*, *havo* or *vwo* qualification, are the same as those set out in the Secondary Education Act *(wvo)*. The other three types of programmes are included in the WEB. Ultimately they will be made available at a number of different levels.

Vocational practice training

It is essential that a well-rounded vocational programme should provide for a certain degree of practical know-how and experience. The WEB has therefore focused a great deal of attention on reinforcing the practical elements of vocational programmes.

Every vocational programme must devote a substantial portion of its curriculum to vocational practice training, with a minimum level being set at 20%. No participant is eligible to receive a diploma without first having completed this programme element. Ultimately, the amount of time spent on vocational practice training in each programme will be determined by the LOBs in the exit qualifications.

Registration, the Central Register

All programmes within the qualification structure will be included in a Central Register of Vocational Training Courses (CREBO).

This register records which institutions provide which programmes, what the exit qualifications consist of, how 'vocational practice training' is arranged and which partial qualifications are subject to 'external verification'.

The register also reports which programmes are funded by the state and which examining institutes have the right to provide 'external verification' of assessments.

The CREBO will make it easier for everyone to find out which courses are on offer in vocational education and how the programmes fit into the qualification structure. The list will be determined annually, by the Minister of Education, Culture and Science and the Minister of Agriculture, Nature Management and Fisheries, and will apply for the following school year.

Institutions must report their programmes prior to 1 October at the latest. In the meantime, the LOBs may advise on the classification structure within the register.

Non-state-funded programmes (private institutions)

One of the innovative elements of the WEB concerns educational institutions not eligible to receive funding from the state (i.e. private institutions). They too will be able to integrate their programmes into the system set out in the new law, under the same terms as the state-funded institutions. Among other things, that means that programmes at secondary vocational level can be provided by state-funded and private education institutions. It will also be possible to include programmes in the qualification structure which receive no funding whatsoever from the state. State-funded institutions and private educational institutions which aim to offer a programme taken from the qualification structure must meet the same criteria. For example, they both have to follow the rules with respect to reporting to the CREBO, quality assurance, teaching and consumer protection. In this way, a system will be created in which state-funded and private institutions can participate on an equal footing - and consequently compete with one another to a certain extent.

The inclusion of non-state-funded education in the WEB touches on an important interest: private institutions provide more than half of all the courses on offer in secondary vocational education. It will be particularly reassuring for participants to know that the programme in which they are enrolled is securely anchored in a national qualification structure.

Annex 2
Similarities and differences between the Dutch system with the European 5-level Structure

As said before, in developing the current Dutch format for the national qualification structure, use has been made of SEDOC descriptions (along with other relevant systems). It is possible to compare the Dutch five level structure with the SEDOC classification. This has been done in the following table:

SEDOC	DUTCH QUALIFICATION STRUCTURE
Level 1: **Training which gives entry to this level: compulsory education and pre-vocational training.** This training is followed either in an educational establishment, or within the framework of extra-curricular training programmes, or in a company. The amount of theoretical knowledge and practical skill required is very limited. This qualification *which is intended for carrying out fairly straightforward work* can be obtained fairly readily.	**Level 1** **(assistant)** The worker is responsible for the execution of his/her own work. The work consists primarily of the application of automated routines and only to a limited extent the application of standard procedures. It involves job-related skills and knowledge.
Level 2: **Training which gives entry to this level: compulsory education and vocational training (including dual training as apprenticeship schemes).** At this level, a *full qualification* is obtained for a clearly defined activity, using the instruments and techniques concerned. This activity consists largely of *practical work, which can be carried out independently* within the boundaries of techniques learned.	**Level 2** **(occupational practitioner)** The worker is responsible for the execution of his own work. In addition there is a collective, co-operative responsibility in the work whereby co-operation with colleagues takes place. The work consists of applying automated routines and standard procedures. It involves occupation-related skills and knowledge.
Level 3: **Training which gives entry to this level: compulsory education and/or vocational training and additional technical training or technical vocational training or other vocational training at secondary level.** This implies *more theoretical knowledge* than the previous level. This level comprises mostly practical work which can be carried out independently and/or comprises other responsibilities such as *leadership and co-ordination.*	**Level 3** **(specialised practitioner)** The worker is responsible for the execution of his own work and must also account for his actions towards colleagues (non-hierarchical). In addition he bears explicit and hierarchical responsibility: he monitors and supervises in the application of automated routines and standard procedures. His work comprises the application of standard procedures and combining standard procedures. In addition he combines or devises procedures, in the light of work preparation and supervisory activities. It involves for the most part occupational skills and knowledge.

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SEDOC	DUTCH QUALIFICATION STRUCTURE
Level 4: **Training which gives entry to this level: secondary vocational education (general or vocational training) and post-secondary technical training.** This is *technical training at a higher level* in educational establishments or elsewhere. The qualification which is obtained as a result of this training comprises knowledge and *skills* at a higher level, but in general terms does not require knowledge of scientific principles in the different areas concerned. These skills and knowledge make it possible in particular to *take responsibility for planning and/or supervision and/or management* in an autonomous or independent way.	**Level 4** **(middle management practitioner)** The worker is responsible for the execution of his own work and must also account for his actions towards colleagues (non-hierarchical). In addition he bears explicit hierarchical responsibility; this responsibility concerns planning and/or administration and/or management and/or development of the whole production cycle. Furthermore he combines or devises new procedures. It involves specialist skills and knowledge and/or occupation-independent skills and knowledge.
Level 5: **Training which gives entry to this level: secondary education (general of vocational training) and full higher education.** Whoever has followed this training is able to carry out an occupational activity as a salaried or *self-employed worker and has a thorough command of the scientific background* of the occupation. The qualifications required for carrying out an occupational activity can be integrated at these various levels.	**Level 5:** The occupational practitioner is responsible for the execution of his own work and must account for his own actions (towards colleagues) (non-hierarchical). This work can involve both the application and combining/devising of a limited number of complex standard procedures (specialisms). The work may also include the application, combining and devising of standard procedures for a range of activities (breadth). In addition the occupational practitioner bears explicit hierarchical responsibility; it does not involve responsibility in the executive sense such as is the case with monitoring and supervisory activities, but rather responsibility in a formal, organisational sense. It involves specialised, occupation-independent skills and knowledge. The emphasis is on devising new procedures, tactical and strategic actions and skills with regard to development and execution of policy.

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4.4 *UNITED KINGDOM: Bob Mansfield*

Vocational education and training in the UK is based on National Occupational Standards which are used to create National Vocational Qualifications. A National Occupational Standard is a description of the **standard of performance** expected in employment - often referred to as the **outcome.** A National Vocational Qualification is a description of the **evidence** which a candidate has to collect to prove that they can reach the standard of performance defined by the National Occupational Standard.

National Occupational Standards specify what must be achieved, not what must be learned. The National Vocational Qualification is like an assessment requirement, it specifies how the National Occupational Standards will be assessed.

National Vocational Qualifications are assessment led. A National Vocational Qualification contains a number of assessment specifications which describe what the candidate has to achieve and the evidence they need to show that they are competent. The National Vocational Qualification does not contain, or require, a particular learning process. In fact it is not permitted to base a National Vocational Qualification on a course of study. Candidates will have to learn knowledge and skills to achieve the National Vocational Qualification, but how and where they learn and how long it takes them to learn is not part of the National Vocational Qualification specification.

Consequently the regulations and quality assurance processes for National Vocational Qualifications are concentrated on the assessment process, not the learning process.

This approach is different from many of the systems used in the EU states. Most other vocational education and training systems are based on a defined curriculum which specifies what must be learned, how the curriculum will be learned and how it will be assessed. The two systems, curriculum based and outcome based are shown in the diagram below.

National Vocational Qualifications are part of a national framework of vocational qualifications recognised by Government and regulated by a Government agency, the Qualifications and Curriculum Authority (QCA)[17]. Different arrangements apply in Scotland where there is a Scottish Qualifications Authority (SQA) and Scottish Vocational Qualifications (SVQs). Although the titles are different, National Vocational Qualifications and Scottish Vocational Qualifications are developed and delivered in the same way.

17 The Qualifications and Curriculum Authority (QCA) was formed in 1997 by the merger of the National Council for Vocational Qualifications (NCVQ) and the Schools Curriculum and Assessment Authority (SCAA). NCVQ was formed in 1986 to develop a national framework of vocational qualifications - NVQs. SCAA had authority over the general educational curriculum in secondary education. QCA combines both of these roles.

Figure 18: Curriculum based and Outcome based qualifications

Curriculum Based	**Outcome Based (UK Model)**
design the curriculum	define the outcome (what will be achieved)
⇩	⇩
teach the curriculum	assess performance against the outcome
⇩	⇩
assess the result	identify what learning is needed
	⇩⇧
	assess performance against the outcome
	(and so on until the outcome is achieved)

There are still many vocational qualifications in the UK which are not National Vocational Qualifications. These may be developed by awarding bodies, employers' associations, colleges of further and higher education or professional bodies. They are not regulated by Government in the same way as National Vocational Qualifications, but if they meet certain criteria the Government may provide funding for students.

The development of National Vocational Qualifications started in 1986 with the establishment of The National Council for Vocational Qualifications and the start of the National Standards Programme. The National Standards Programme was managed by the employment ministry which encouraged employers to set up 'Lead Bodies' to set standards for employment which were developed into National Vocational Qualifications.

A methodology for the development of standards was developed during 1988 - 1991 by the Department for Education and Employment. This methodology has undergone a number of changes and the latest version was published by QCA in April 1998. In 1998, QCA took over the responsibility for managing and funding the development of National Occupational Standards.

There are currently 927 different National Vocational Qualifications at five levels in eleven occupational areas. QCA announced the award of the 2,000,000th NVQ in September 1998.

4.4.1 *The organisations involved in UK vocational education and training*

The Department for Education and Employment (DfEE)

The ministry responsible. DfEE provides funding to QCA to meet its responsibilities and to NTOs (see below) to support the development of National Occupational Standards and National Vocational Qualifications. Funding provided to NTOs must be matched by funding and other support from organisations in the occupational sector.

The Qualifications and Curriculum Authority (QCA)

An Agency of the DfEE. QCA is a public body, which reports to the minister, the Secretary of State for Education and Employment but it is not part of the Civil Service. QCA's activities are funded by DfEE. QCA accredits awarding bodies which are permitted to offer NVQs, sets criteria for the accreditation of NVQs and accredits NVQs which are submitted by awarding bodies. QCA does not award qualifications - it is a regulatory body which sets quality assurance criteria. QCA is also responsible for the development of the National Framework of Vocational Qualifications and allocates each NVQ to a position in the framework which is determined by the occupational sector and the level of the NVQ. NVQs are awarded at five levels. Level 1 NVQs cover a limited range of routine work activities - level 5 covers professional occupations.

National Training Organisations (NTOs)

NTOs are responsible for identifying and meeting the vocational education and training needs of an occupational sector. The UK does not have an official listing of occupations so the NTOs agree the scope of their operations. The agreements are made with the other NTOs and with the DfEE. The DfEE is responsible for officially recognising the NTO.

There are currently over 70 NTOs. NTOs have been set up to replace the previous organisations which were called Lead Bodies. There were over 140 Lead Bodies and many of these have been combined to form NTOs.

NTOs represent employers (usually through existing employer associations), employees (usually through established sector trade unions) and representatives from education and training. The NTO develops National Occupational Standards in close consultation with the industry and groups the standards into National Vocational Qualifications which are developed in cooperation with an awarding body. NTOs receive funding from QCA to help in the development of NVQs.

Awarding Bodies

Awarding bodies develop and administer vocational qualifications (including NVQs). There are 125 awarding bodies, some of which co-operate to form joint awarding bodies or consortia. Awarding bodies which deliver NVQs must be recognised by QCA and must meet accreditation criteria. Awarding bodies vary considerably in size, scope and status. The main types are:

- **Specialist Awarding Bodies.** Organisations whose main business is the award of qualifications. These organisations usually award qualifications in many occupational areas and develop their own qualifications (not NVQs) which may be offered in schools and colleges of further and higher education. The largest and most significant are Oxford, Cambridge and RSA (OCR), the City and Guilds of London Institute and EDExel.
- **Sector Awarding Bodies.** Groups of NTOs which offer NVQs in an occupational sector - for example, the Hospitality Awarding Body which offers NVQs in the hotel and catering occupations.
- **Professional Bodies.** Professional Bodies often offer professional qualifications for membership of their associations and may also offer NVQs which are relevant to their occupational area.
- **NTOs.** Some NTOs offer their own qualifications. Usually, the NTO will form a partnership with one of the Specialist awarding bodies.
- **Employer associations.** Some employer associations offer NVQs for their sector.

Developing National Occupational Standards and National Vocational Qualifications (NVQs)

The development of National Occupational Standards and National Vocational Qualifications may happen in two ways. These two methods may be called the 'Mapping method' and the 'Qualification method'.

The mapping method

In the mapping method, the whole occupation is mapped. Mapping involves two stages. The first is called an 'Occupational Map' which is a quantitative description of the occupation which includes:

- the numbers employed;
- typical job/role titles and descriptions and the estimated numbers in each;
- typical progression and promotion routes in the occupation;
- existing qualifications and the numbers awarded.

The second stage is a 'Functional Map' developed by the process of Functional Analysis. Functional Analysis is not mandatory - NTOs may use other methods if they wish. However, Functional Analysis has been used for many years and is the most clearly documented method.

A Functional Analysis analyses the functions performed within the occupation without reference to specific jobs. The analysis identifies those functions which are performed by individuals. Each of the functions is then analysed into a number of National Occupational Standards.

From the Occupational Map decisions can be made about roles within the occupation where qualifications may be needed. Qualifications may be needed because:

- none currently exist;
- there are restrictions to access in qualifications which do exist.

Proposed qualifications (NVQs) are then built up by selecting appropriate functions from the Functional Map. Many qualifications can be developed from the Functional Map and some will share common functions.

The qualification method

In the qualification method the NTO will decide that a specific qualification or related group of qualifications is needed in the occupation. National Occupational Standards are developed only for those qualifications.

4.4.2 *Developing National Occupational Standards*

There is no fixed method of developing National Occupational Standards but there are guidelines and recommendations which most NTOs accept and use. The development process usually involves:

- desk research by occupational experts and standards consultants[18] to identify roles and functions;
- the drafting of known functions into a standard format;
- a consultation process with practitioners in industry which may involve;
  - workshops
  - postal surveys and questionnaires
  - structured interviewing
  - observation
- consultation with panels of occupational experts.

Each National Occupational Standard is a detailed performance specification which consists of:

- a title which describes what should be achieved (also known as the 'outcome');
- a number of statements which describe successful performance (called 'performance criteria');
- a description of the range of different circumstances to which the standard will apply (called range statements);
- the evidence which will be required to demonstrate competence; and
- the essential knowledge and understanding which is needed to achieve the standard.

National Occupational Standards are not only used to develop NVQs - they are published by NTOs and many organisations use them as benchmarks for personnel and training activities.

4.4.3 *Developing National Vocational Qualifications*

When the National Occupational Standards have been developed they can be used to form National Vocational Qualifications. Each National Vocational Qualification is a group of National Occupational Standards which reflects the sorts of jobs people do in industry. An NVQ consists of a number of 'Units of Competence'. A Unit of Competence contains a number of related National Occupational Standards. There is no fixed number of Units of Competence in an NVQ, but the average range is between six and fifteen. To each Unit of Competence, the NTO adds an evidence requirement which specifies the type and amount of evidence that must be presented to demonstrate competence in the Unit. The structure of an NVQ is shown in Figure 19.

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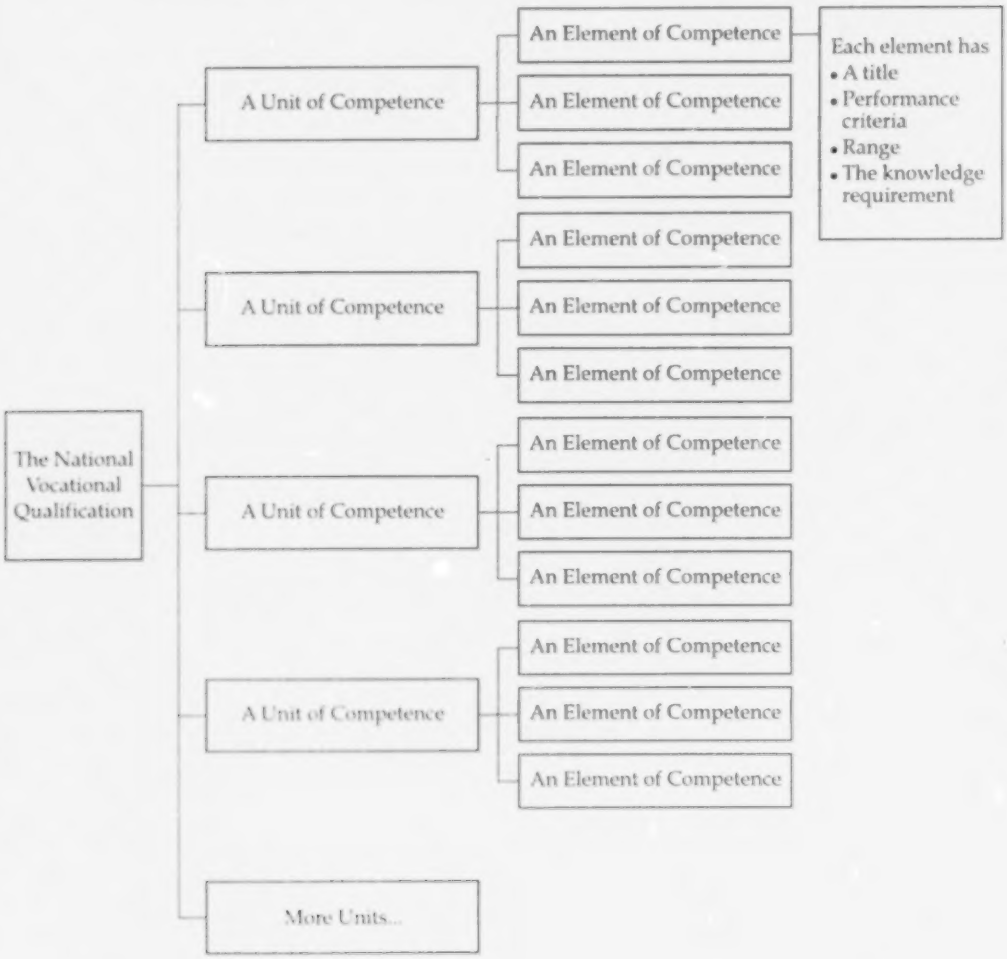
18 Most National Occupational Standards are developed with the help of 'standards consultants' who specialise in the methodology agreed for the formation of National Occupational Standards. Consultants can be individuals who work on freelance contracts or small companies who specialise in this work.

Figure 19: The structure of a National Vocational Qualification

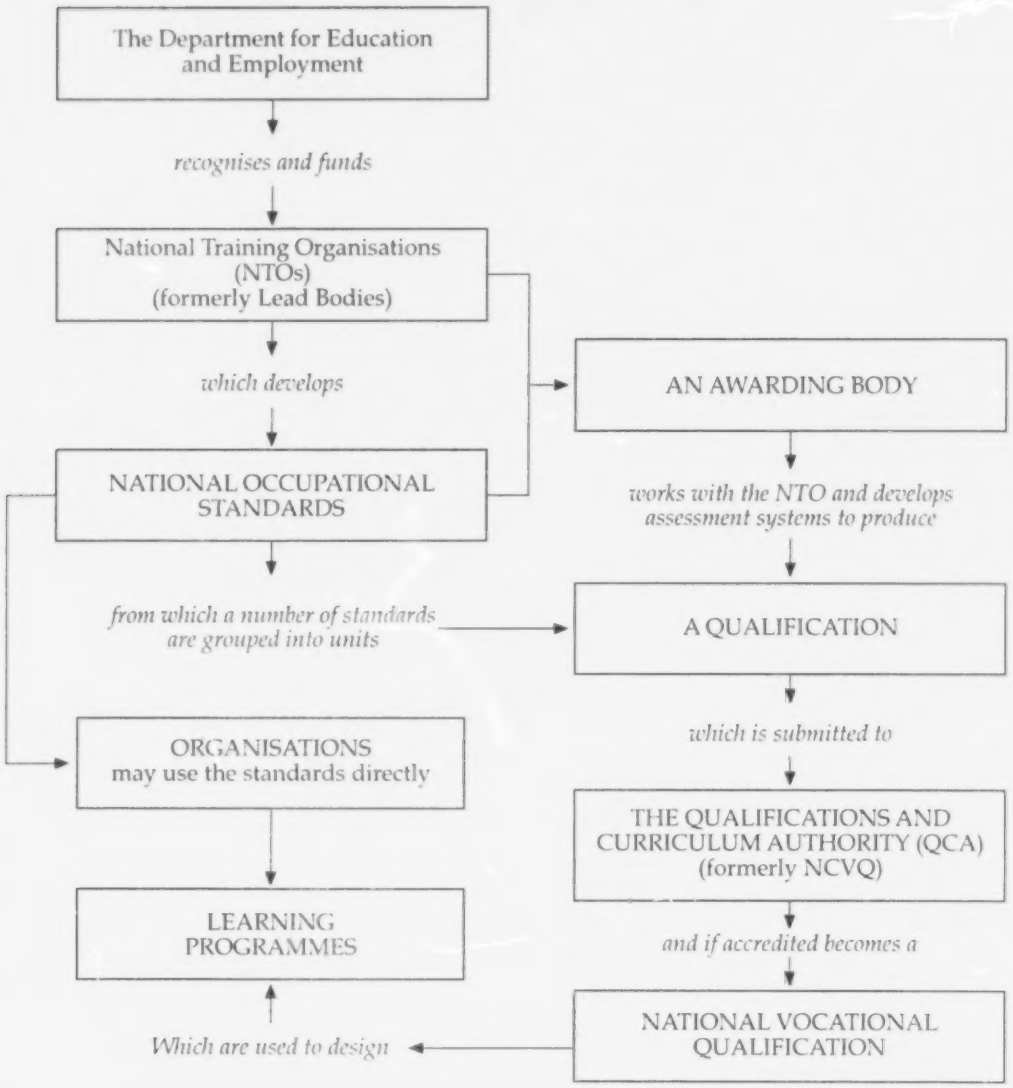


NTOs work with an awarding body to deliver and administer the NVQ - some have a formal partnership with the awarding body.

The role of the awarding body is to develop an assessment specification in partnership with the NTO, to administer the delivery of the NVQ through a national network of assessment centres and to provide quality assurance for the assessment of the NVQ.

The proposed NVQ is then submitted to QCA. QCA applies the criteria which must be met by every vocational qualification, and if the proposed qualification meets all the criteria then it is accredited as an NVQ. Figure 20 shows the entire process.

Figure 20: Development and accreditation of NVQs


The Department for Education and Employment
recognises and funds
National Training Organisations (NTOs) (formerly Lead Bodies)
which develops
NATIONAL OCCUPATIONAL STANDARDS
from which a number of standards are grouped into units
ORGANISATIONS may use the standards directly
LEARNING PROGRAMMES
Which are used to design
AN AWARDING BODY
works with the NTO and develops assessment systems to produce
A QUALIFICATION
which is submitted to
THE QUALIFICATIONS AND CURRICULUM AUTHORITY (QCA) (formerly NCVQ)
and if accredited becomes a
NATIONAL VOCATIONAL QUALIFICATION

4.4.4 *Implementing National Vocational Qualifications*

The NVQ is then implemented. From this point the awarding body takes over the administration of the NVQ.

The implementation of NVQs, particularly the assessment process, is subject to a number of quality assurance requirements.

The awarding body is accredited by QCA to award NVQs. The awarding body is required to set up a national network of approved assessment centres which administer the NVQ assessment process at a local level. Assessment centres may be run by colleges, employers or private training providers.

The assessment of NVQs is subject to detailed regulation. The roles and responsibilities of all those involved are clearly defined and those directly involved in assessment must be qualified through the achievement of specified Units of Competence, which are part of an NVQ in training and development.

Three roles, which require training and certification, are of critical importance:

- The **assessor.** Assessors are appointed by approved centres to assess candidate evidence.
- The **internal verifier** - who advises assessors and samples assessments made by centre assessors to check on the quality and consistency of assessment.
- The **external verifier** - who regularly visits centres to check that the approval criteria are being met and samples assessments. The external verifier is appointed by the awarding body, normally on a contracted part-time basis.

The assessment process for an NVQ involves four stages:

- assessment planning - to identify existing competence and to plan the way in which evidence will be collected;
- collecting evidence - in which the candidate and assessor identify and collect items of evidence, which is usually recorded in a workbook or portfolio of evidence;
- judging the evidence - in which the validity of the evidence is confirmed and the evidence is matched against the specification of the National Occupational Standard; and
- the assessment decision - in which the assessor judges whether the evidence, taken overall, is sufficient to demonstrate the candidate's competence in a Unit of Competence.

Assessment is based on evidence which the candidate produces. Evidence may take many forms such as:

- physical items which the candidate has produced;
- observations of the candidate by the assessor;
- evidence from other people who have observed the candidate;
- case studies and assignments;
- written answers to questions posed by the assessor; and
- oral answers to questions asked by the assessor.

Evidence may be collected in the workplace, in a training centre or at a college. Some candidates will attend full time or part time courses which lead to NVQs - but this is not mandatory.

Evidence must be judged against a number of criteria, which are:

- it must be valid - it must directly relate to the aspect of competence being assessed and it must be produced by the candidate alone;
- it must be current - i.e. up to date;
- it must be sufficient - i.e. there must be enough evidence to show sustained performance over time.

The NVQ is built up over time by accumulating Units of Competence. Each Unit may be separately certified if the candidate requests it - but candidates normally accumulate the Units until the full NVQ is achieved.

Although each case is different because the assessment plan is structured against the specific needs of the candidate, the process of assessment will follow a typical pattern.

1. A candidate will be issued with either a Log Book or some other means of recording the collection of evidence.

2. Depending on the requirements of the awarding body, a candidate and their assessor will record and sign entries in the Log Book as the evidence is collected and judged. Some awarding bodies also require the candidate to produce a portfolio of all the evidence as well as the Log Book. The portfolio will be cross referenced in detail to demonstrate that the candidate has met all the requirements for the NVQ in each Unit.

3. Following the assessment planning phase the assessment arrangements will vary depending on whether the candidate is in employment or in an educational institution. If the candidate is at work, the assessor will arrange to visit the candidate at regular intervals to examine the evidence that the candidate has collected. The assessor usually works with the candidate to review the evidence and to match it to the Unit of Competence that it is associated with. If the assessor judges that the evidence is inadequate, the candidate is invited to collect more evidence (or evidence of better quality). In a college, evidence is collected as part of the course and the candidate may also attend work placements to learn and collect evidence from real work.

4. Assessor visits in the workplace are also used to explore the knowledge and understanding of the candidate. This may be done informally by discussion and questioning or more formally by issuing a pre-set test or questionnaire.

5. Assessors are responsible for noting any areas where the candidate will have difficulty in collecting evidence from their workplace. Assessors are expected to negotiate and agree alternative methods for collecting evidence, which might mean agreeing a short secondment to another department or section for the candidate to gain the necessary experience, setting up a simulation in the workplace or a training centre, allowing the candidate to complete a project or assignment to provide the evidence. Normally the assessor will need to obtain permission from the assessment centre or the awarding body for these arrangements (awarding body regulations vary).

6. As evidence is accumulated, whole Units of Competence are achieved. As Units are achieved they are approved by the assessor and will then be passed on to the Internal Verifier for checking.

7. When all the Units of Competence in the NVQ have been achieved the Log Book and the portfolio (if used) are sent to the assessment centre for final internal verification. The records are then stored until the next visit of the external verifier who has the option of selecting any portfolio and Log Book for sampling.

8. Once the external verifier has approved the candidate portfolios the centre makes a claim for certification. Once the claim is validated by the awarding body the NVQ certificate is issued to the centre and then passed on to the candidate.

During the assessment planning process, assessors and candidates will also identify those areas where the candidate has little or no direct experience or is clearly not competent. These areas will be the target for developing an agreed learning programme. Since an NVQ is not a prescribed programme of learning, the learning programme may take many forms. Candidates in colleges will usually follow a predetermined learning programme, but employed candidates may choose to attend short courses, received coaching and training from experienced colleagues, use open learning materials or study at home.

Summary

Main features of the UK vocational training system:

1. How are the sectors of the economy involved in vocational education and training?

Each industry sector has a National Training Organisation (NTO) which represents the needs of employment (through employers, employee representatives and practitioners from vocational and professional education and training).

2. How are standards set?

Occupational standards are developed by the NTO in consultation with employers and practitioners in the sector - many different methods are used to identify the standards, but the structure of a standard is broadly the same for each sector.

3. What is the content of the standards?

Occupational standards describe 'best practice' in employment and are intended to reflect future requirements. The standards describe performance requirements (what people must be able to do), the essential knowledge and understanding which is required and the way in which performance and knowledge must be assessed. The assessment specification will identify which outcomes must be demonstrated within the normal working environment, which may be simulated and which must be separately tested (by skill tests or written tests).

4. How are qualifications developed?

Occupational standards are usually defined for the whole sector. When the standards have been defined they are grouped into Units of Competence (modules) and then into qualifications to meet the needs of employment. The NTO then works with an Awarding Body to develop a fully specified National Vocational Qualification (NVQ). In Scotland, the qualification is called a Scottish Vocational Qualification (SVQ).

5. How are qualification recognised and evaluated?

Two agencies of government, the Qualifications and Curriculum Authority (QCA) and the Scottish Qualifications Authority (SQA) evaluate qualifications against a number of nationally agreed criteria. The criteria include:

- qualifications must be based on occupational standards defined by a National Training Organisation
- the qualification must be made up of units of competence, each of which can be achieved on its own;
- both performance and knowledge must be assessed - if performance in work is not possible, then some tests can be taken instead - but it is not possible to have all knowledge testing;
- qualifications should be available to everybody who could achieve them -restricting qualifications to particular groups (gender, age etc) is not allowed; and

- qualifications should represent what is best in an occupation and abilities which may be needed in the future.

When accredited, the qualification is entered into a National Framework of Vocational Qualifications which has eleven areas of competence (similar to Occupational Families) and five levels of achievement. The eleven areas are:

1. Tending animals, plants and land
2. Extracting and providing natural resources
3. Constructing
4. Engineering
5. Manufacturing
6. Transporting
7. Providing goods and services
8. Providing health, social and protective services
9. Providing business services
10. Communicating
11. Developing and extending knowledge and skill

6. *Who is responsible for assessment?*

The Awarding Body is responsible for assessment which is delivered through assessment centres using trained and qualified assessors. An assessment centre may be a training provider or an employing organisation.

7. *What is the content of the NVQ or SVQ – and how is the qualification delivered and evaluated?*

The NVQ or SVQ does not include a compulsory syllabus, curriculum or any of the requirements which are commonly found in other European vocational training qualifications – like entry requirements, length of training, type of training establishment, methods of training. Any training provider may offer the NVQ and SVQ by developing a learning programme which meets the requirements of the occupational standards embedded within the qualification and also provide the assessment arrangements. The learning programme may consist of a formal course, open or distance learning or work based learning. The quality of training providers is independently evaluated by a government inspection agency. The quality of assessment is evaluated by the Awarding Body.

8. *Who can take an NVQ or SVQ?*

Anyone can register for an NVQ through the Awarding Body. People who register are usually called 'candidates' – rather than 'students'. Candidates for NVQs and SVQs may be employed or in full time education – and there are no age limits. For candidates in full time education, work experience with an employer will usually be necessary to meet the requirements of the standards.

NVQs and SVQs are compulsory components of two national training schemes – National Traineeships and Modern Apprenticeships.

Further Information

The Qualifications and Curriculum Authority and the Scottish Qualifications Authority produce a number of publications about the UK vocational training system. Contact details are:

The Qualifications and Curriculum Authority
29 Bolton Street
LONDON W1Y 7PD
Tel: +44 20 7509 5555
Web: http://www.qca.org.uk

The Scottish Qualifications Authority
Hanover House
24 Douglas Street
GLASGOW G2 7NQ
Tel: +44 141 248 7900
Web: http://www.sqa.org.uk

5. List of sources and references

Analytisch-vergleichende Untersuchung der Curricula im kaufmännischen Bereich der MOE - Länder / Ch. Gerke und S. Rösler TRANSFORM. Gutachten im Auftrag des Bundesinstitus für Berufsbildung, Berlin 1996, S. 6 - 12

Berufliche Bildung. Curriculumentwicklung und - revision. Die Integration kaufmännischer Inhalte in die gewerblich-technische Ausbildung. Leitfaden für die Umsetzung. / Klaus Przyklenk (Verantw.). Hersg.: Deutsche Gesellschaft für Technische Zusammenarbeit (gtz), Abt. 404 - Wirtschaftberatung und Berufliche Bildung. Eschborn 1997

Betrifft: Berufsbildung: Begriffe von A - Z für Praxis und Theorie im Betrieb und Schule / Jörg-Peter Pahl; Ernst Uhe (Herg.). -Seelze (Velber): Kallmeyer, 1998. ISBN 3-7800-4177-4

A cross country analysis of curricular reform in vocational education and training in the Phare countries / David Parkes (editor); Detlef Gronwald, Peter Grootings and Soren Nielsen. European Training Foundation, Turin (December) 1998

Current - Orientierungshilfe zur Curriculum-Revision und Entwicklung / Hans-Günter Schröter (Hersg. im Auftrag der gtz) Eschborn 1998

Curriculum - und Berufsbildungszusammenarbeit. Diskussionsbeiträge und Materialien zur internationalen Berufsbildungszusammenarbeit / Hans-Günter Schröter (Hrsg.): Hrsg.: Deutsche Gesellschaft für Technische Zusammenarbeit (gtz). Overall Verlag. Berlin 1996. ISBN: 3 925961151

Curriculumreform im luxemburgischen Enseignement Secondaire Technique - Leitideen - Methoden - Erfahrungen: Zwischenbericht zum Projekt PROF, April 1991 - Juli 1993. /Eckhard Klieme, Carmen Kloft und Hendrik Vogt. IBF - Institut für Bildungsforschung, Ministere de l'Education Nationale. Bonn, Februar 1994

Dimensionen der Curriculumreform in der Berufsbildung Litauens: theoretisch-praktischer Überblick. - Beitrag für den Berufsbildungs-Workshop in Kaunas / Litauen (TRANSFORM-Programm) in der Zeit vom 16. - 20.12.1996 / Rimantas Lauzackas. Kaunas. Januar 1997

Entwicklung eines Systems von Berufsbildungsstandards, Prüfungen und Zertifizierungen in der Türkei / Development of a System of Occupational Standards, Testing and Certification in Turkey / Ulrich Degen und Gerhard Kohn. Hrsg.: Bundesinstitut für Berufsbildung. Der Generalsekretär. Berlin, August 1997

ETFacts, European Training Foundation. Number 11, December 1998, ISSN 1027 - 7889

The Evaluation/Progress Review of Vocational Education and Training-Standards. European Training Foundation. Subgroup C. Expert Report / Hermann Schmidt, Bonn 1998

The framework model of vocational educational standard TOURISM. European Training Foundation, Subgroup C. (Report prepared for the European Training Foundation. Moscow), March 1998.

A Glossary of the words used to describe Occupational Standards and National Vocational Qualifications. PRIME Research and Development Ltd, 1998. Available for downloading from the PRIME web site: http//:www.prime-research.demon.co.uk The glossary was

developed using the Cobuild English Dictionary, based on the Bank of English at Birmingham University. The dictionary is published by Harper Collins, London - ISBN 0 00 370941 8 (hardback) ISBN 0 00 375029 9 (paperback).

Glossary of educational technology terms. Glossar zur Bildungstechnologie / Prepared by the Division for the Development of Education, UNESCO, for the International Bureau of Education / Herausgegeben von der Abteilung Entwicklung des Bildungswesens, UNESCO, für das Internationale Erziehungsbüro. Published in 1992 by the United Nations Educational, Scientific and Cultural Organization. Herausgeber: Organisation der Vereinten Nationen für Bildung, Wissenschaft und Kultur. Genf 1992. ISBN: 92 - 3 - 002790 - 1

Glossary of Labour Market Terms and Standard and Curriculum Development Terms. European Training Foundation. Turin 1997

Internationale Tendenzen der Curriculumtheorie und mögliche Konsequenzen für eine Curriculummethode in der beruflichen Bildung in Litauen. - Beitrag für den Berufsbildungsworkshop in Kaunas / Litauen (TRANSFORM-Programm) in der Zeit vom 16. - 20.12.1996 / Günter Spreth, Kaunas, Januar 1997

The National Standard of Primary Vocational Education, Baker - entrepreneur. 1. (Philosophical model), 2. (Technology), 3. (Standard). The Ministry of Education and Science of the republic of Moldova. (Report prepared for the European Training Foundation) ,Kisinau 1998

Pilot Projekt "Standards 2000". Report on Pilot Projekt for VET-Standards in Kyrgyzstan, Moldova, Mongolia. Hermann Schmidt. European Training Foundation. December 1998

Projekt "Standard 2000". Final report. Republic of Macedonia. Centre for Vocational Education, Training and Development. (Report prepared for the European Training Foundation), Bitola 1998

Qualifications and training methods, Volume 1: Manual, Development of Standards in Vocational Education and Training, Margret Kunzmann, Ute Laur-Ernst unter Mitarbeit von Bernd Hoene; European Training Foundation. Turin, 1998. ISBN 92 - 828 - 4427 - 7

Review of the National Standard of Primary Vocational Education "Baker - Entrepreneur", submitted by the Ministry of Education and Science of the Republic of Moldova, (Prepared for the European Training Foundation) / Hermann Schmidt, Bonn 1998

Standard of Ukraine. Education: vocational. Profession - office secretary-referent. Edition official. (Report prepared for the European Training Foundation), Kiew 1997

State Educational Standard of Initial Vocational Training. Occupation: Waiter (Draft). Ministry of Labour and Social Protection of Kyrgyz Republic. (Report prepared for the European Training Foundation), Bishkek 1998.

Towards a Competent Workforce. Bob Mansfield and Lindsay Mitchell. Gower Publishing, Aldershot, November 1996.

Appendix

Definitions

The *UNESCO Glossary*[19] of 1992 (only) lists a general term "standard". It is defined as

> an agreed level of performance (p. 113)

It does not contain the terms "occupational standard"/"qualification standard". There are, however, extensive definitions for the terms "curriculum", "training goals" and "instructional programme". In the glossary **curriculum** is defined as:

> the planned interaction of students with instructional content, instructional resources and instructional processes for the attainment of educational objectives (p. 38).

The term **instructional programme** is defined as:

> subject matter to be taught along with the establishment of the teaching time for each subject matter, as well as the list of contents to be acquired - in other words, the required knowledge. The programme generally takes the form of administrative texts (p. 66/67).

Further down in the explanation of the term it says:

> A 'curriculum' is the organisation of learning, in a particular discipline or at a given level. The purpose of the curriculum is to define the objectives of the learning, educational content and the methods and the materials to be employed (p. 67).

The terms "instructional programme" and "curriculum" are almost placed on a par. They are both supplemented by the term **"education goals"**, which according to the ***UNESCO-Glossary*** describes concrete events, which can be undertaken within a specific period.

In the ***European Training Foundation Glossary***[20] more recent international terms can be found. The definitions for the term **occupational standard** (p. 108) and **national occupational standards**, designed as national standards, are linked with the term **vocational standard** and **national vocational standards**. For them the following designations and comments are given:

- Occupational standards are measures of the extent to which an individual can meet the demands of performance.
- National occupational standards are those set for all those employed in specific work within a sector.
- Vocational standards are measures of the readiness of an individual to enter a vocational area or to advance to a higher level within a vocational area.

19 Glossary of educational technology terms. Glossar zur Bildungstechnologie / prepared by the Division for the Development of Education, UNESCO, for the International Bureau of Education / Herausgegeben von der Abteilung Entwicklung des Bildungswesens, UNESCO, für das Internationale Erziehungsbüro. Published in 1992 by the United Nations Educational, Scientific and Cultural Organization. Herausgeber: Organisation der Vereinten Nationnen für Bildung, Wissenschaft und Kultur. Geneva 1992. ISBN: 92-3-002790-1

20 Glossary of Labour Market Terms and Standard and Curriculum Development Terms. European Training Foundation. Turin 1997.

- National vocational standards are those set for all practitioners within a vocation in a country.

Comment:

Vocational standards may apply across different sectors of an economy and a very wide set of work roles - for example Design, The Built Environment. Occupational standards may also be broadly based, especially national occupation standards which apply to the same type of work role across the economy. However, occupational standards apply to specific types or work role... (such as Set Design, Design (Products), Graphic Design, Visual Merchandising, Architecture)....

Vocational standards tend to be used as the basis for curriculum design and education and training delivery.

Occupational standards tend to be used to specify what is required of people at work.

Increasing the distinction between the two is being eroded as standards are developed to integrate education and training outputs with the requirements of the world of work. Either may be used as qualifications standards.

There is another closely related term which is defined in the ***European Training Foundation Glossary*** (p. 126) as **"qualification standards"**. Here it is stated:

1. A qualification (or certificate) is often used as an indicator that an individual has achieved certain standards which may be vocational, occupational, educational or professional.
2. The term can be also be used to refer to the quality of a qualification, or set of qualifications - as in the qualification standards for engineering are very high. Or this qualifications is of degree standard. In this sense the term is used to indicate the extent to which a qualification meets, fails to meet or exceeds what is expected of it. The term may be used to refer to the requirements for entering a job or occupation.

Comment:

Qualification can be used as proxies - if the individual has achieved the qualification he or she is assumed to be able to meet certain standards.

The standards may be explicit or implicit in information about the qualification.

Qualifications can themselves be accepted as standards - as in she has a degree and so has a satisfactory standard of education. In some countries achievement of specified qualifications is the standard required to enable individuals to practice within a specified vocational area or occupational role - this is usually the case with medicine for example.

The sense in which the term is used under definition 3 is not common English usage. It is clearer in English to talk about entry requirements, job requirements, or occupational competence, depending upon the context.

The ***PRIME Glossary*** defines an **"occupational standard"** (p. 6). This is a summary of the definition:

> An occupation is a job or profession ...
>
> A standard is a level of quality or achievement ...
>
> An occupational standard sets the level of quality or achievement required in a job or profession.
>
> An occupational standard is the "benchmark" used to judge the quality of performance of candidates.

It is stated on page 7 in conjunction with the related term **"qualification / vocational qualification"**:

> A vocational qualification represents the skills and competence you need for a particular work role (job or profession). A vocational qualification is a certificate which states that you have been assessed as competent in a particular work role (job or profession).

By way of contrast in the ***European Training Foundation Glossary*** (p. 125) **"qualification"** is defined as:

1. The requirements for an individual to enter, or progress within, an occupation.
2. The educational and training experience and attainments which an individual has.
3. An official record of achievement which recognises successful completion of education or training or satisfactory performance in a test or assessment.

By way of addition it is stated for definition no. 3:

> "This usage of the term is more common in the UK, USA and Hungary than elsewhere."

A new German reference work by ***Pahl/Uhe***[21] states in conjunction with the term **"qualification"** (p. 137):

> A qualification is deemed to be the sum of abilities, knowledge and skills which a person requires in order to meet the requirements imposed in conjunction with carrying out work activities... With respect to usability in private live, occupation, in society the learning success is a qualification. ...An integral part of the qualification term is the aspect of usability, i.e. it does not refer to the desirable and non-commercial abilities of a person but rather to those abilities which are actually required in the employment system.

In conjunction with the terms **qualification / standard / curriculum** another term is of increasing importance in vocational training: **"competence"**. In former times the details relating to the knowledge, abilities and skills required to carry out a profession were dominating; they are listed separately. For some years now this "atomisation" has been abandoned in favour of complex competence.

The ***European Training Foundation Glossary*** (p. 45) contains a very general definition:

> Competence
>
> - The ability to do something well or effectively.
> - The ability to meet the requirements of employment.
> - The ability to meet demands of specific work roles.

21 Betrifft: Berufsbildung: Begriffe von A - Z für Praxis und Theorie in Betrieb und Schule / Jörg-Peter Pahl; Ernst Uhe (Ed.). Seelze (Velber): Kallmeyer, 1998. ISBN 3-7800-4177-4

The ***PRIME Glossary*** contains a similar explanation:

> Competence is the ability to do something well or effectively ...
>
> If you are competent to do something, you have the skills, abilities or experience to do it well ...
>
> Competence is the ability to perform to the required standard in an occupation."

The ***UNESCO Glossary*** lists the term **"competency- based education"** which is deemed to be:

> education deriving from the specification, learning and demonstration of knowledge, skills, behaviour and attitudes required for a given role, profession or career." (S. 31)
>
> Let's move on to the terms **"modularisation and modules"**.
>
> In the context of vocational education and training it does not just come from the English language but is closely linked with initial and continuing vocational training in the United Kingdom.
>
> The system of National Vocational Qualifications (NVQs) consists of a defined combination of modules/units (cf. the example "United Kingdom"). In the United Kingdom system the most important characteristic of the modules is that they are not used to lay down learning content but rather define the level of competence to be acquired through occupational learning and/or occupational work and which is to be assessed.

Pahl/Uhe gives the following definition of the term **"modularisation"**:

> Modularisation means the organisational principle of vocational training with the goal of a specific structure and sequence of training modules...
>
> A module is deemed to be an independent, closed (initial or continuing) training unit which is of a certain size and monitors access by means of preconditions and learning goals and has a controllable and certified outcome. These modules can normally be freely selected or selected and combined to a limited degree by the trainee and lead (normally) via so-called credit accumulation systems (Reuling 1996) to flexible qualifications (without final assessments) on varying levels, which can be better adapted to individual preconditions and social demands.

European Training Foundation

Standards in Vocational Education and Training - Specification, Experience, Examples
(Volume 2)

Luxembourg: Office for Official Publications of the European Communities

1999 - 98 pp. - 21.0 x 29.7 cm

ISBN 92-828-4428-5

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